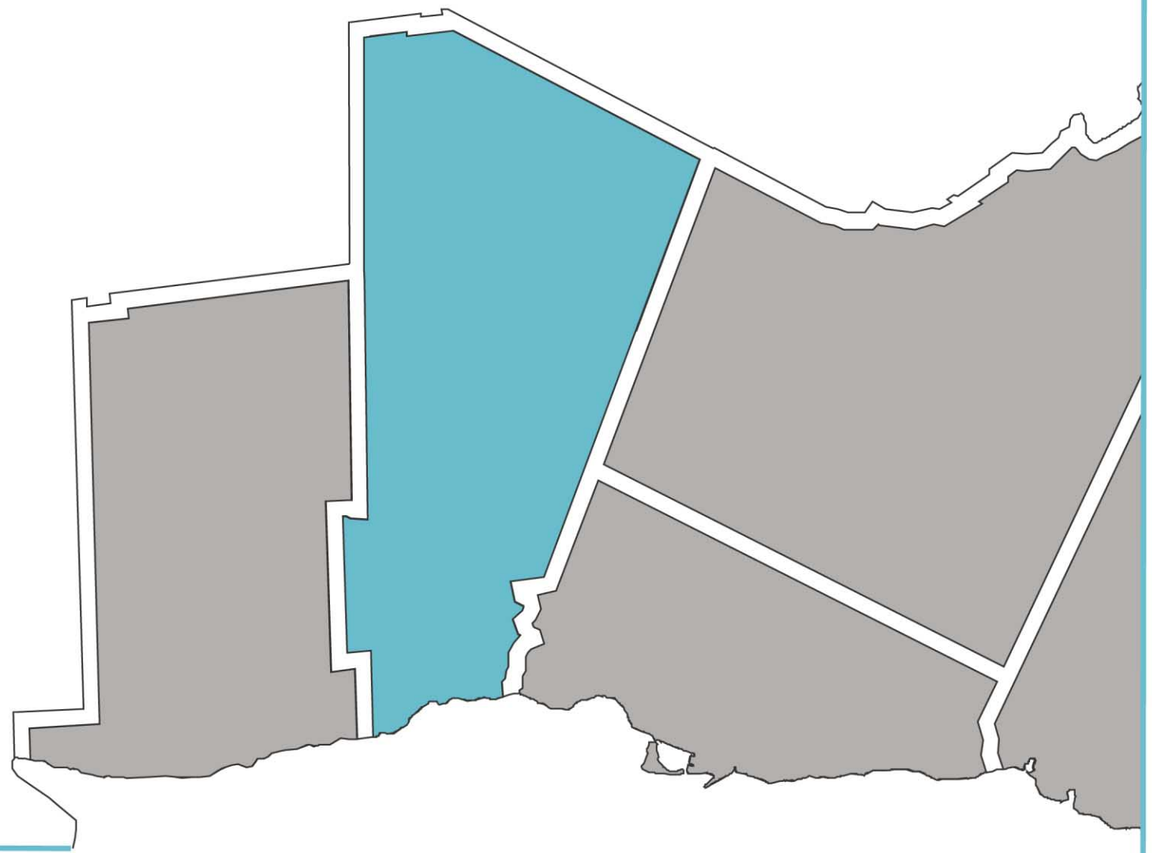
Region of Peel

Working for you



REGIONAL PLANNING ATLAS

planning Peel

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Introduction

Regional Planning Atlas:

Produced by The Region of Peel Planning Department in celebration of the first 25 years of regional planning.

The Regional Planning Atlas project has two principal objectives. The first is to provide information in map, graphic and textual form to give the reader a geographic perspective on Peel Region and the changes that have occurred over a quarter of a century of Regional history, since the Region was formed in 1974. The second objective is to provide interesting examples of the potential uses of the spatial data, mapping, and Geographic Information System (GIS) tools of the Planning Department.

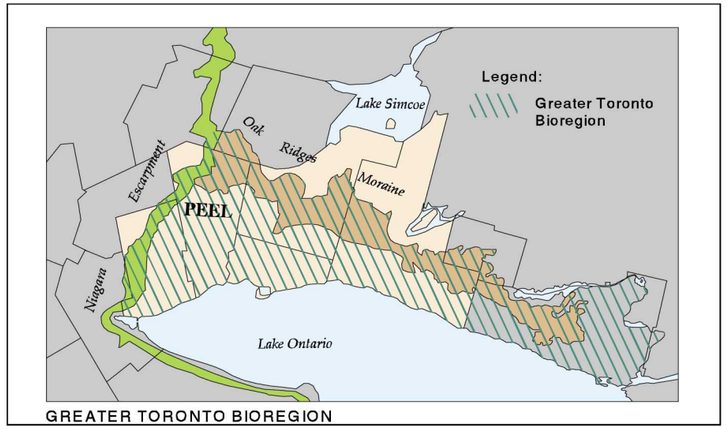
The Atlas is to serve as an educational tool for the students of Peel. The Atlas provides local geographic information about Peel Region that complements the physical and human geography themes studied by Grade 7 and 8 students.

The Atlas has been organized around two major themes:

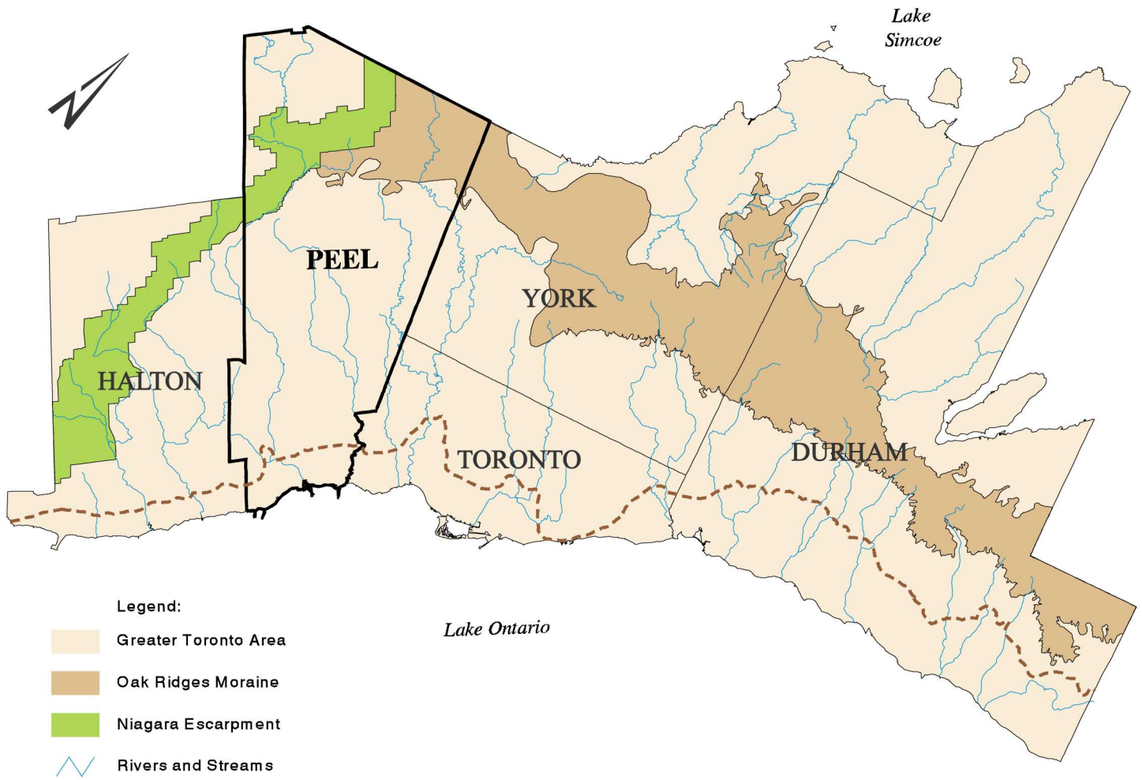
1) the natural environment and resources

2) human settlement within a general theme of natural and administrative regions

This project is dedicated to Peter E. Allen,
Region of Peel Commissioner of Planning, 1974 to 1999.



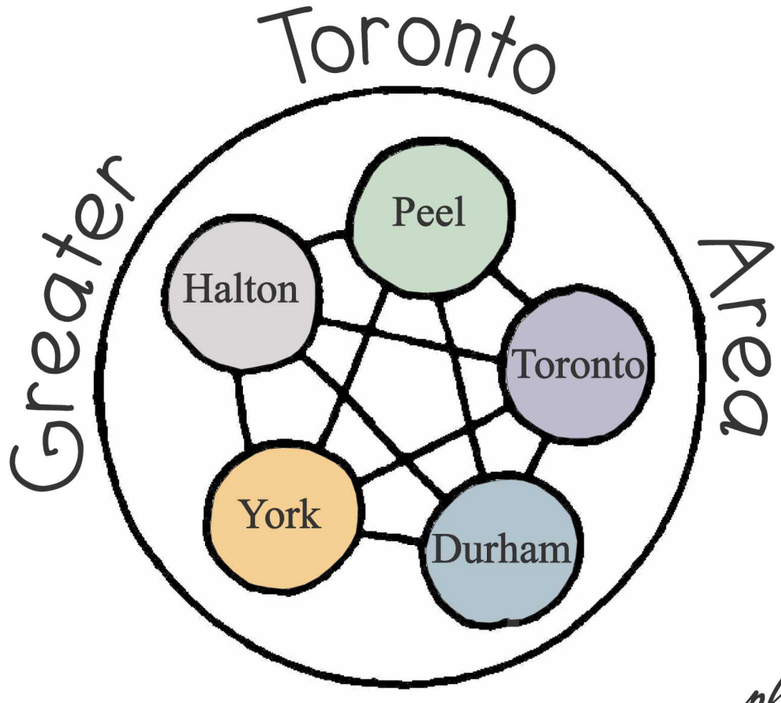
GREATER TORONTO BIOREGION

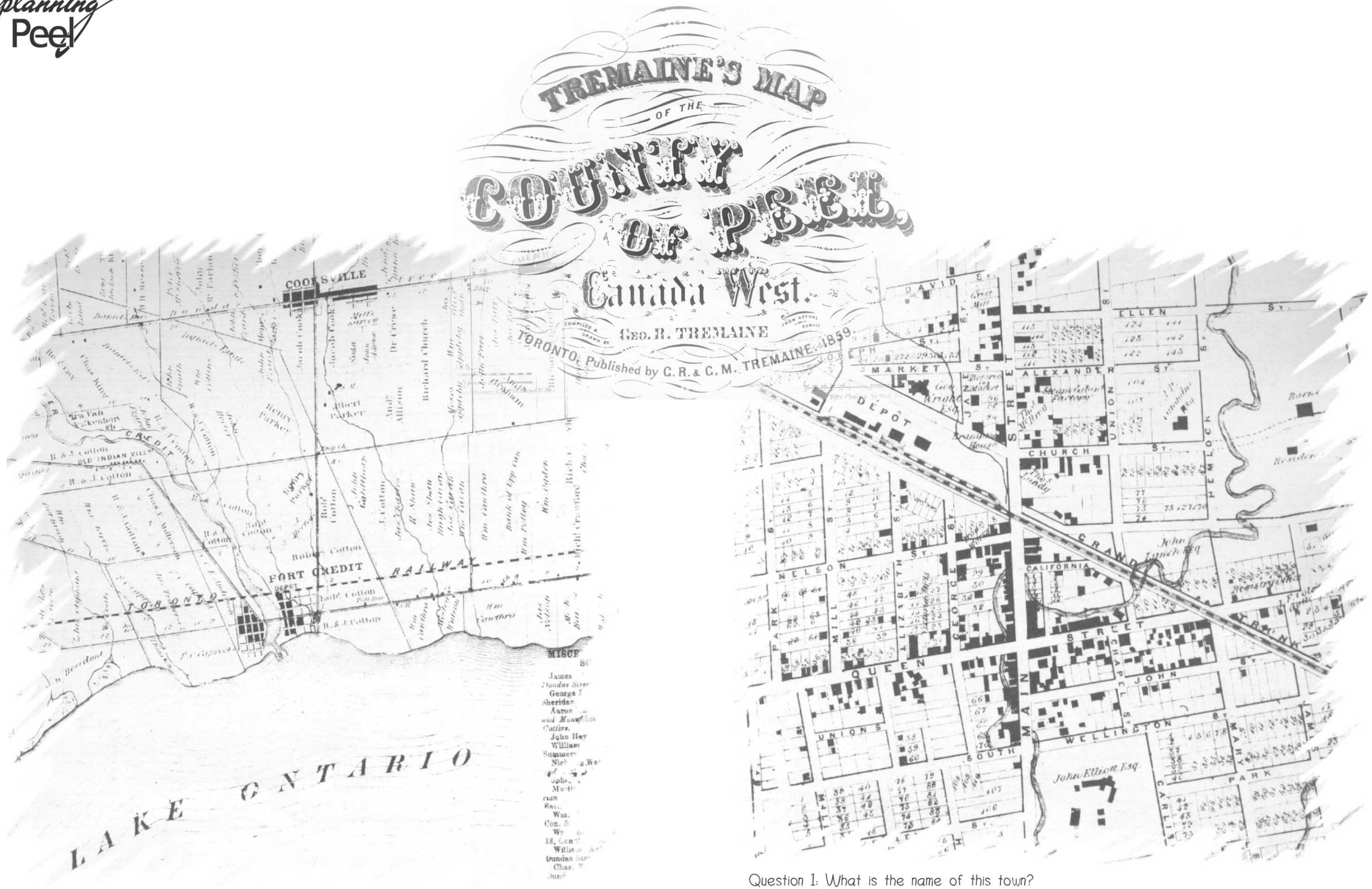


What is a Region?

A region is part of the earth's surface that has distinct characteristics, based on human or physical geography. The Region of Peel is an example of a region based on human geography. It is one of five administrative Regions that are part of the Greater Toronto Area (GTA). All of the Regions in the GTA have important social and economic links with each other that combine to make up the GTA economy.

Peel is also part of a larger natural region based on physical geography. Bioregions are landscape units that are defined by the biological processes that occur within these areas. Lands and waters within the Greater Toronto Bioregion share climatic and many ecological similarities. The Niagara Escarpment and the Oak Ridges Moraine are large natural features located in the Greater Toronto Bioregion. Both provide habitat for plants and animals and shape the physical landscape of the GTA. Along with Lake Ontario, these landscape features form the boundaries of the Greater Toronto Bioregion.





Question 1: What is the name of this town?

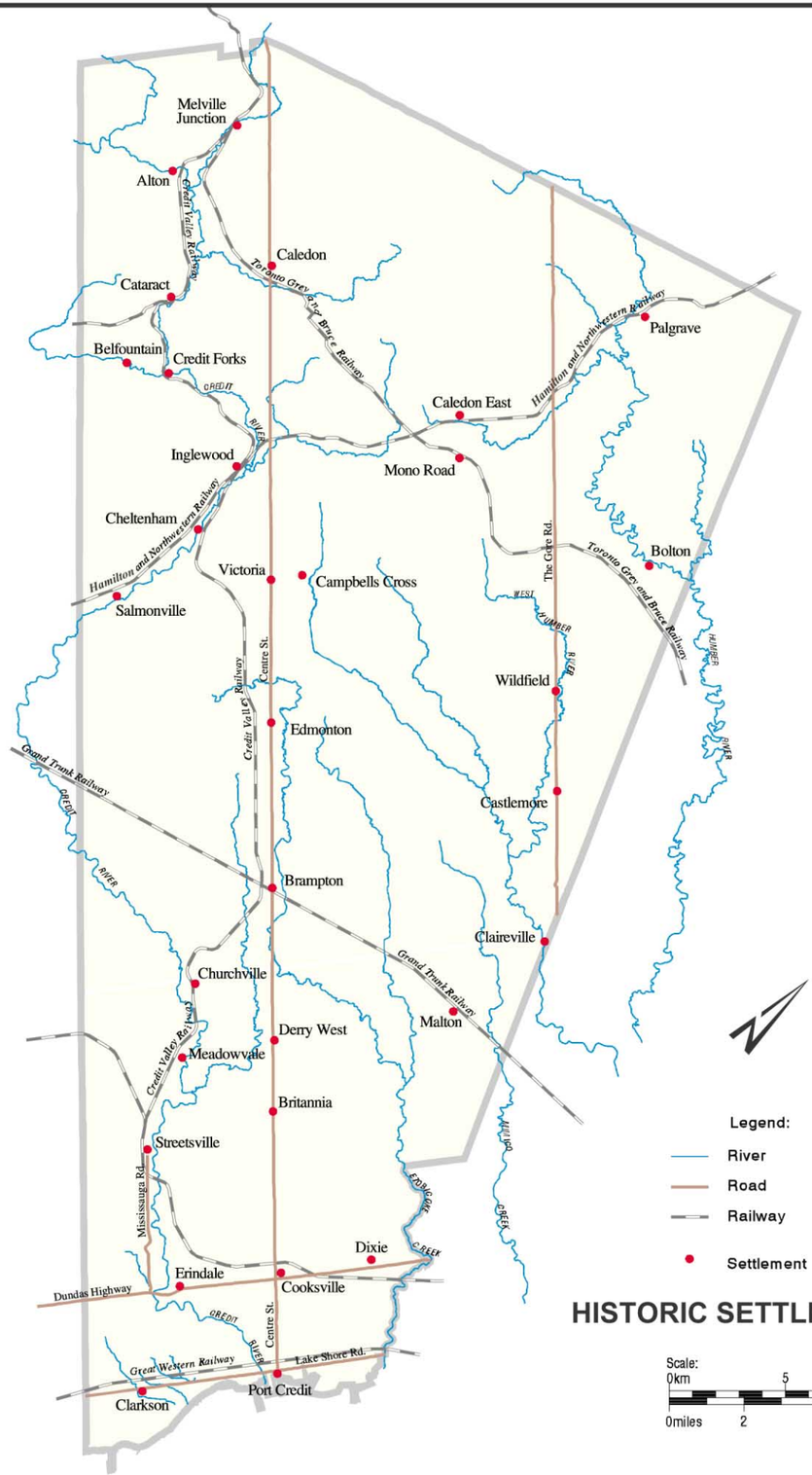
Answer on page 31.

Historic Settlement Patterns

In 1805, the British government purchased over 70,000 acres (28,000 hectares) of land along the shore of Lake Ontario, from Etobicoke Creek to Burlington Bay, from the Mississauga Indians. The tract extended nine kilometres inland (to present day Eglinton Avenue). In 1818, additional land for settlement was needed, and the remaining 648,000 acres of the future County of Peel were acquired.

By 1835, European settlement had changed the landscape of Peel from vast forests into farms and villages linked by a regular pattern of roads. Many settlements were located on the banks of rivers because rapidly flowing water could be used as a source of power for sawmills, grist mills and woolen mills.

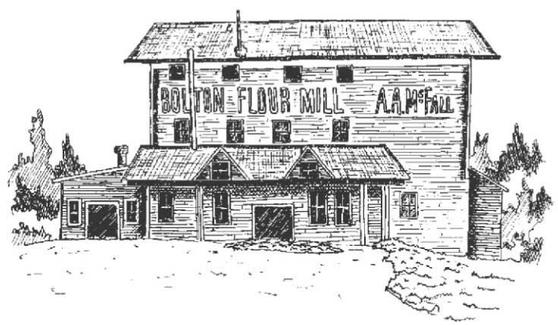
In 1855, The Great Western Railway was the first railway line completed through Peel. Other railway lines appeared soon afterwards, changing the settlement pattern of the area. Villages bypassed by the railway lost population, while a number of small hamlets disappeared. Villages such as Port Credit and Brampton, located along the railway lines, grew into important business centres.



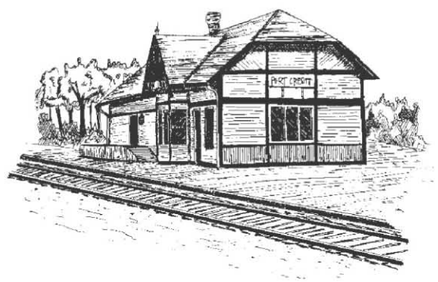
HISTORIC SETTLEMENT

Railway line completion through Peel:

Great Western Railway - 1855
Grand Trunk Railway - 1856
Toronto, Grey and Bruce Railway - 1871
Hamilton & Northwestern Railway - 1876
Credit Valley Railway - 1879



A mill is a building provided with machinery for grinding grain into flour.



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From County to Region

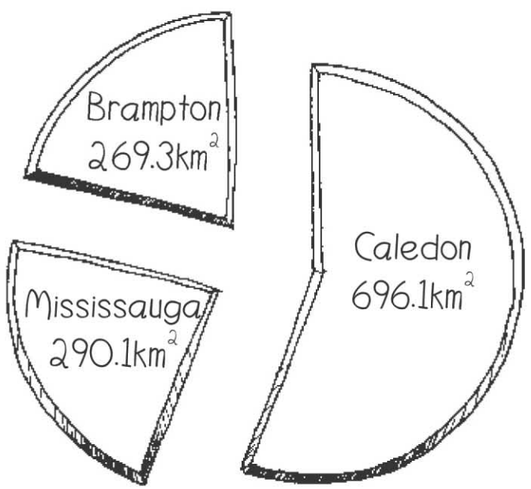
Local government was established in Ontario in 1849, and the United Counties of York, Peel and Ontario were created. Later, Peel County achieved separate status, and in 1867 (the same year as Canadian Confederation) the representatives of the villages and townships met as a County Council for the first time.

The 1950's and 60's, a period of relatively stable population levels in Peel was replaced by greatly increased population growth. The provincial government began a process of municipal reorganization as a result of the rapid growth. The Regional Municipality of Peel Act was passed by the Ontario legislature and came into effect January 1, 1974. The Act replaced Peel County with a two-tiered structure for local government. The Region of Peel formed the upper-tier, and Mississauga, Brampton and Caledon became the lower-tier of municipal government.

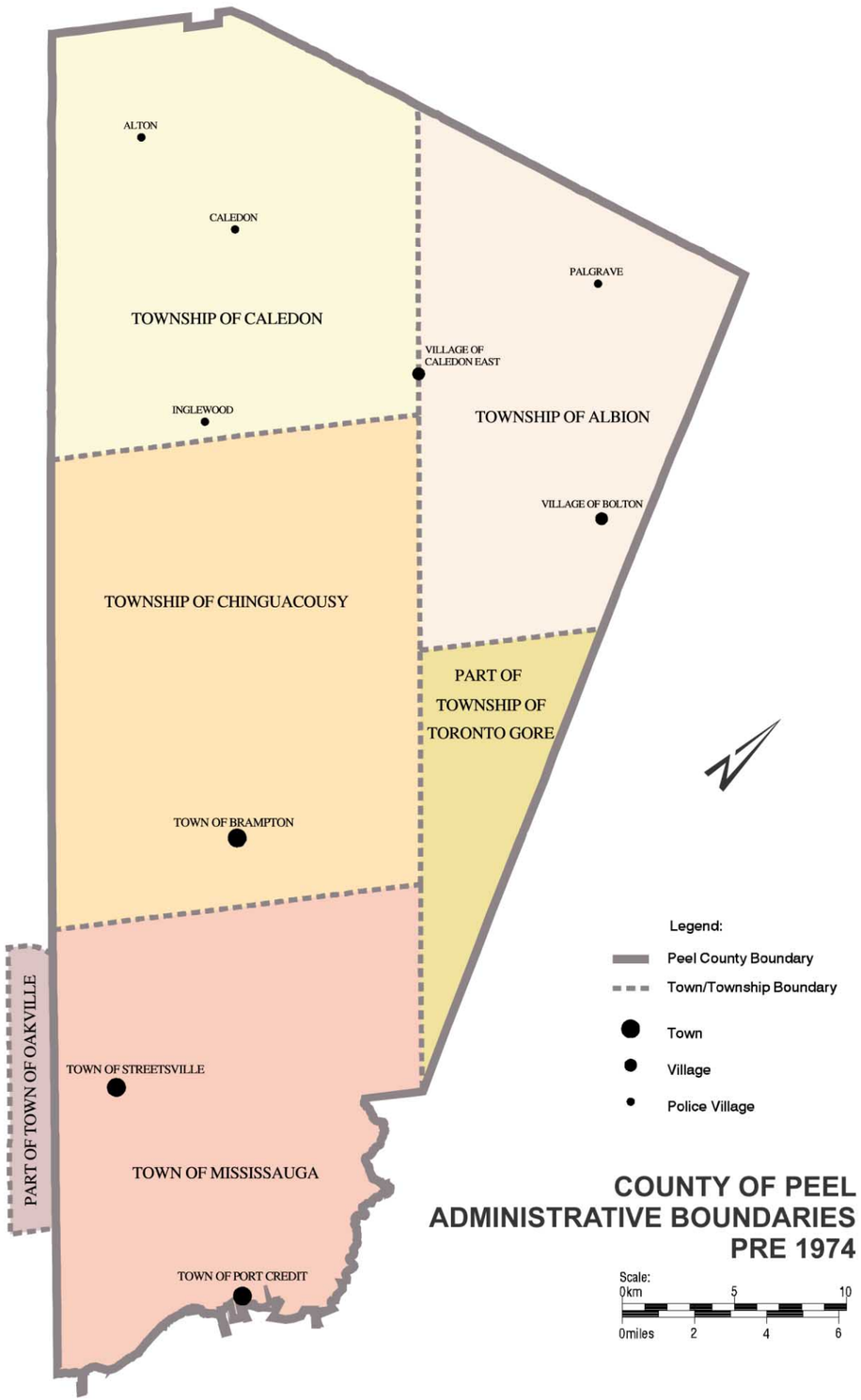
Composition of Regional Government:

Region of Peel Council

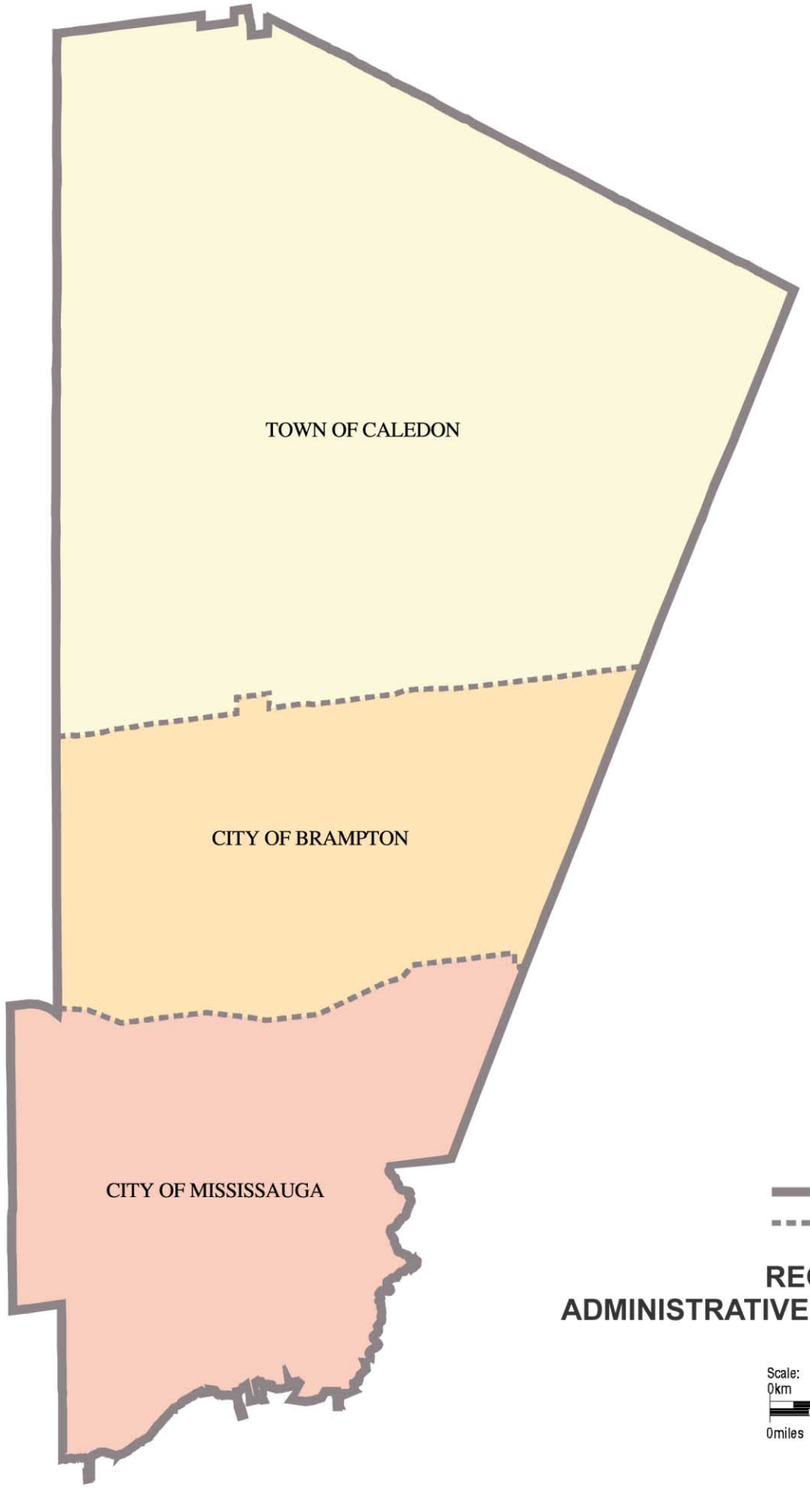
Regional Chair,
Mayors of each of the three municipalities,
9 City of Mississauga council members,
5 City of Brampton council members,
4 Town of Caledon council members.



Peel Region Land Area
= 1,255.5km²



Creation of Regional Government



Legend:

Regional Boundary

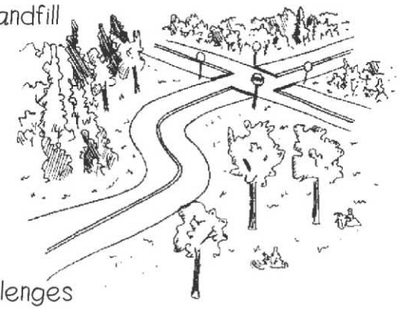
Municipal Boundary

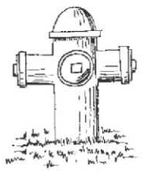
REGION OF PEEL
ADMINISTRATIVE BOUNDARIES
1974

Scale:
0km 5 10
0miles 2 4 6

The Region of Peel provides essential services to those living and working in Peel:

Ambulance
Child care services
Garbage collection and recycling, landfill
Heritage conservation
Major roads
Non-profit housing
Public health
Regional planning
Seniors services
Social assistance
Transit for persons with physical challenges
Water and wastewater facilities

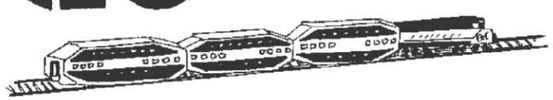




The Region of Peel also funds services that are operated by others:

Police and 9-1-1 emergency services
Conservation authorities
Property assessment
GO Transit

GO Transit



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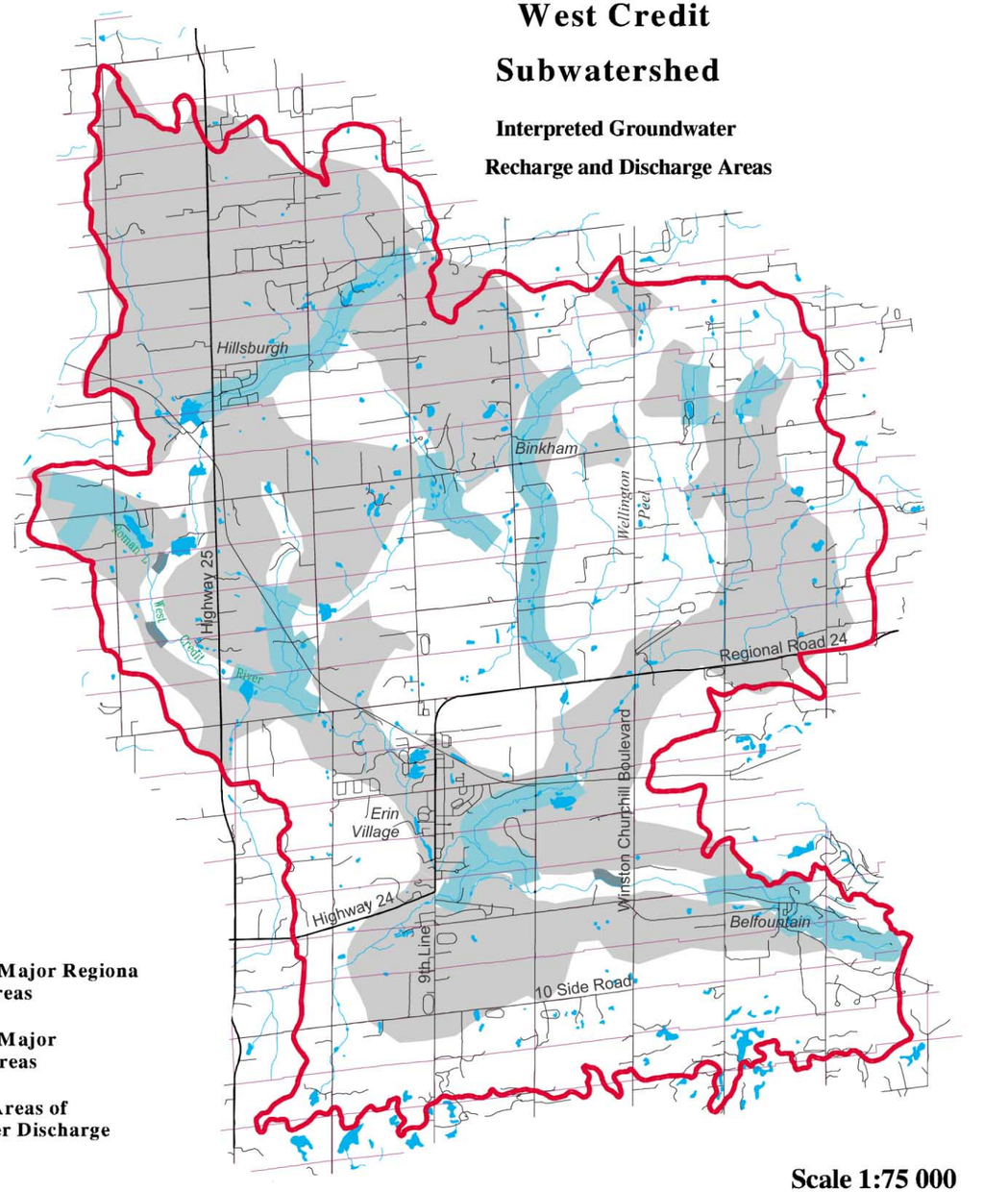
What is a subwatershed?

A subwatershed is an area that drains a certain portion of the total watershed. The West Credit Subwatershed drains to the West Credit River, a smaller river (or tributary) that connects to the main Credit River. Subwatershed plans or studies collect information on land use and natural characteristics of the subwatershed, and develop ways to protect natural systems from environmental problems caused by population growth.

Groundwater.

Water in the ground plays an important role in the way a natural system works through the hydrologic cycle. To understand how groundwater works, you must know where precipitation infiltrates into the ground, "recharging" the level of groundwater (recharge areas), and where it "discharges" back to the surface water (discharge areas). Groundwater recharge areas have soils that allow precipitation to pass through. Areas that store and transport water underground are known as aquifers. Aquifers provide people with drinking water from wells dug into the ground, and discharge cold, clean water into streams creating perfect places for fish to breed. These areas need to be protected from urban development which creates surfaces (e.g. roads, driveways) that do not allow water to enter the ground and recharge the streams and rivers.

The Credit River near Belfountain

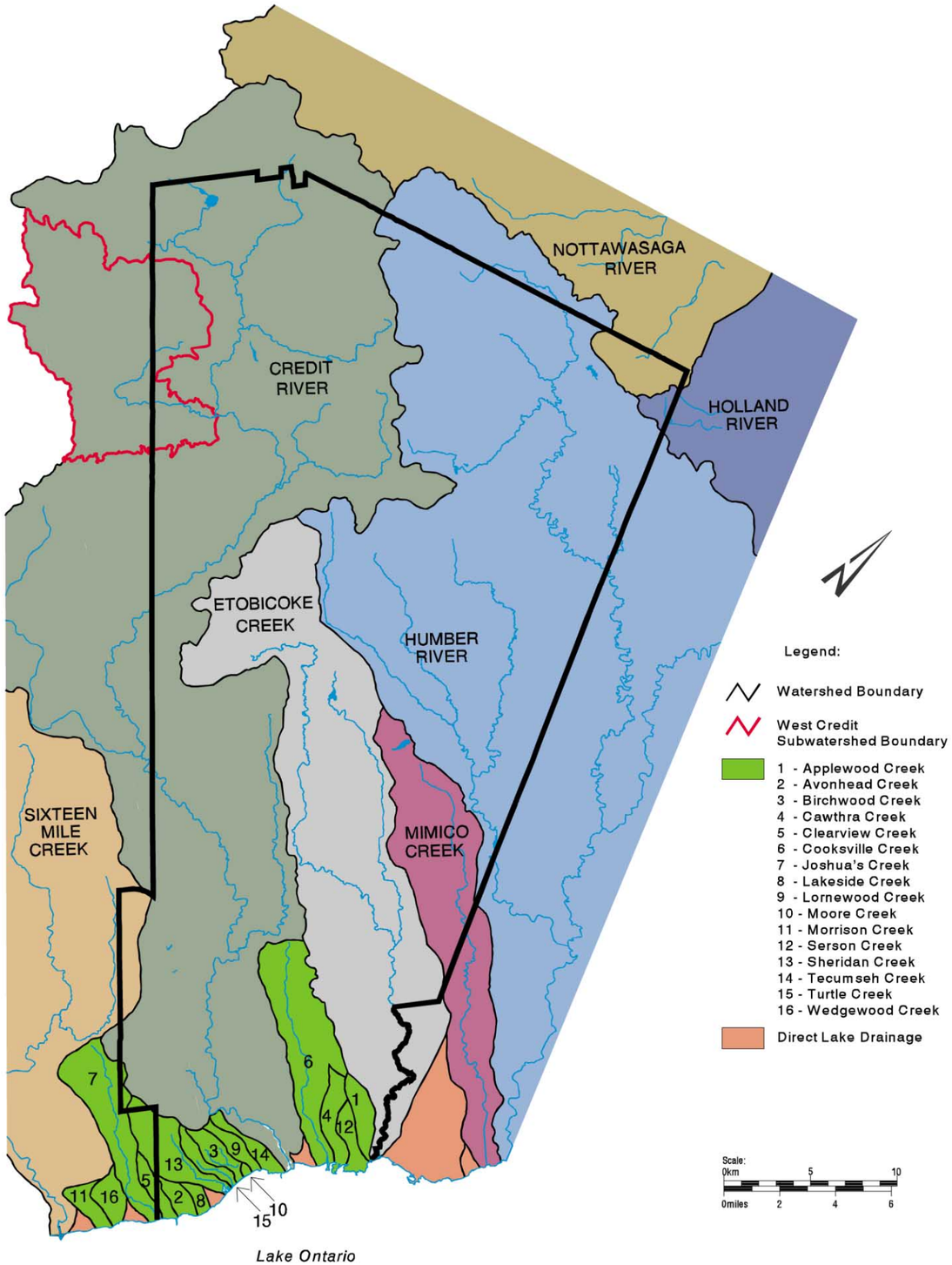


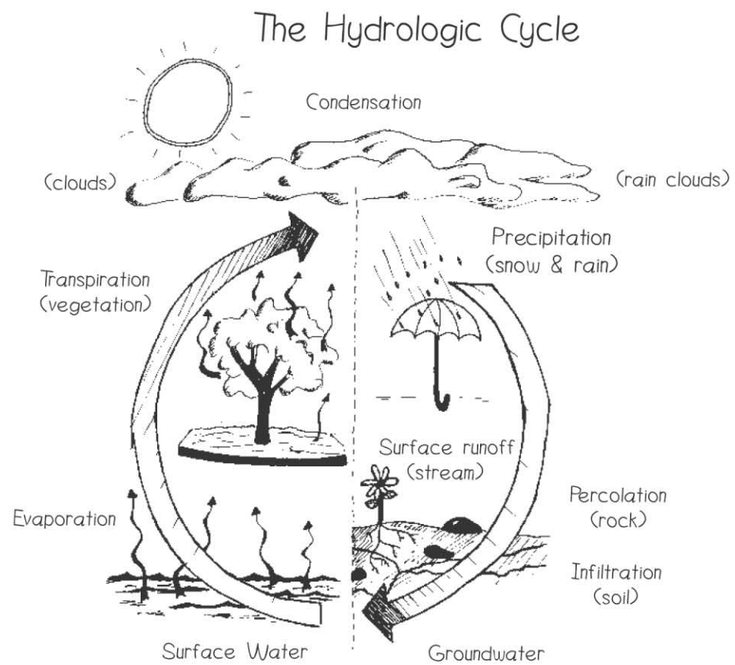
Water

The movement of water over or under the earth's surface provides life to all living things, and creates streams, waterfalls, wetlands, forests and lakes. Water is also very important for drinking, food production, power, and waste disposal.

What is a watershed?

A watershed is a geographic region that is defined by how water moves over the earth's surface. An area of land in which all the water drains or flows to the same place is a watershed. All or a large part of the Credit and Humber River, and Etobicoke and Mimico Creek watersheds are located within Peel Region. Unlike political boundaries, the natural boundaries of watersheds create regions that are the most suitable for protecting the environment, preventing water pollution and preserving places for plants, birds, and fish to live.





The Hydrologic Cycle is the natural circulation of water in the environment. Water evaporates into the atmosphere, falls to the earth as rain or snow (precipitation), and flows to the rivers and lakes to begin the cycle again. The cycle helps us understand how physical, chemical and biological processes work together in the environment.

The purpose of the Credit Watershed Natural Heritage Project is to identify and map the natural heritage features and functions of the Credit River Watershed at the watershed (regional) level and the subwatershed (local) level. The various components that are mapped include: terrestrial, aquatic, and land use. Terrestrial features include natural areas such as Forest (e.g. Deciduous Forest - FoD), as well as human disturbed features (e.g. Cultural Savannah - CS) and Plantations. Aquatic features include rivers, lakes or ponds. Wetlands are transitional areas between terrestrial and aquatic areas (e.g. Coniferous Swamp - SwC). Existing land uses include urban areas, areas of rural development, agriculture and mineral aggregate extraction.

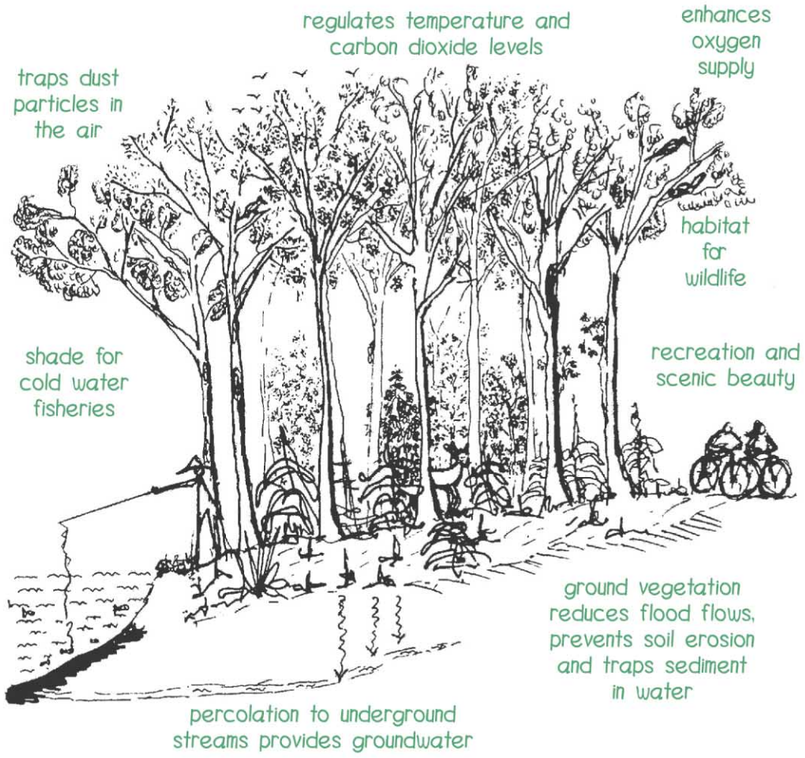
Boundary of Environmentally Significant Area

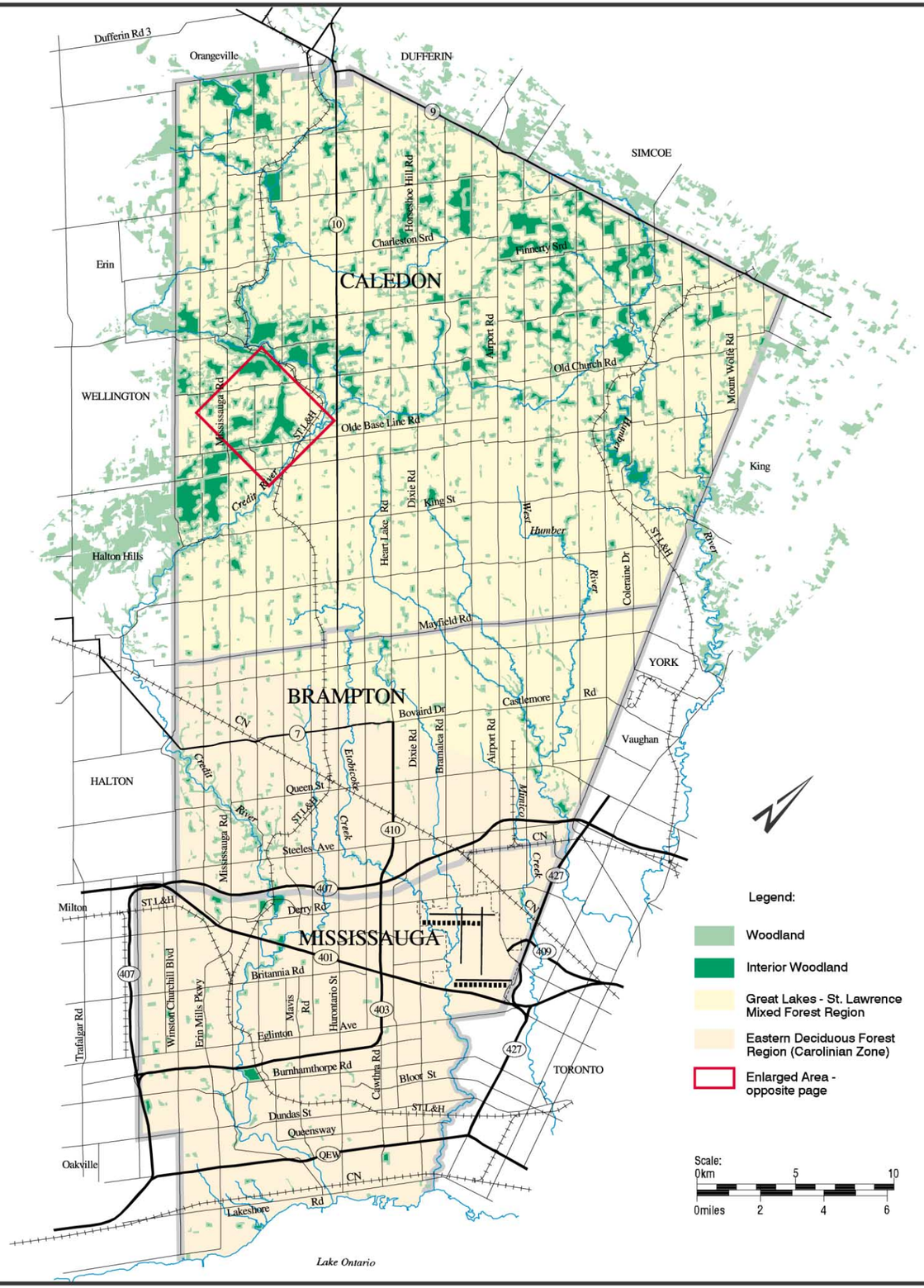
A	Aquatic
CS	Cultural Savannah
CW	Cultural Woodland
FoC	Coniferous Forest
FoD	Deciduous Forest
FoM	Mixed Forest
IA	Inactive Aggregate
IAG	Intensive Agriculture
L/P	Lake/Pond
MOS	Manicured Open Space
Ma	Marsh
NAG	Non-Intensive Agriculture
OF	Old Field
PIC	Coniferous Plantation
SwC	Coniferous Swamp
SwD	Deciduous Swamp
SwM	Mixed Swamp
SwT	Thicket Swamp
T	Thicket
URB/RD	Urban/Rural Development

The Inglewood Forest and Grange Woods Environmentally Significant Areas (ESAs) near the village of Inglewood (Town of Caledon). Digital map information on ESAs in Peel Region is shown on top of Natural Heritage Project mapping. ESAs are identified for protection by the conservation authority through the land use planning process due to the ecological importance of features (e.g. forested area) and/or function (e.g. groundwater recharge).

Woodlands

Peel Region lies within two distinct forest regions. The Eastern Deciduous (Carolinian) Forest region is a southern forest that takes advantage of the unique mix of climate and soil conditions found in southern Peel. This forest contains over 70 species of trees and is home to more nationally rare species of plants and animals than any other region in the country. Typical tree species found include black maple, shagbark, hickory, sycamore, black walnut, tulip tree, and red, white and bur oak. More than 95 percent of this forest in Peel has been lost to agriculture and urban development. The Great Lakes St. Lawrence (Mixed) Forest is a transition zone between the Carolinian and northern Boreal Forest. Typical tree species in this forest include sugar maple, beech, red oak and basswood. Interior woodland refers to areas more than 100m from the forest edge, that can provide habitat for interior wildlife species.


regulates temperature and carbon dioxide levels
enhances oxygen supply
traps dust particles in the air
habitat for wildlife
shade for cold water fisheries
recreation and scenic beauty
ground vegetation reduces flood flows, prevents soil erosion and traps sediment in water
percolation to underground streams provides groundwater



The Region of Peel prohibits development in woodlands that are 30 hectares or larger and takes steps to protect others.

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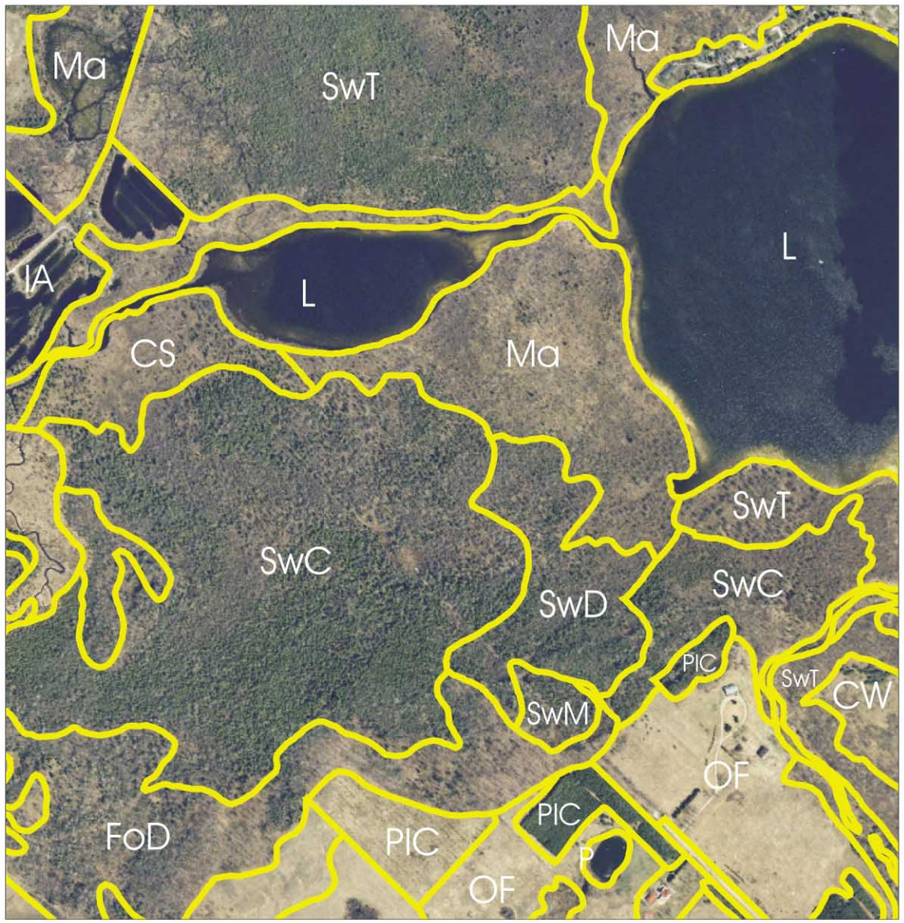
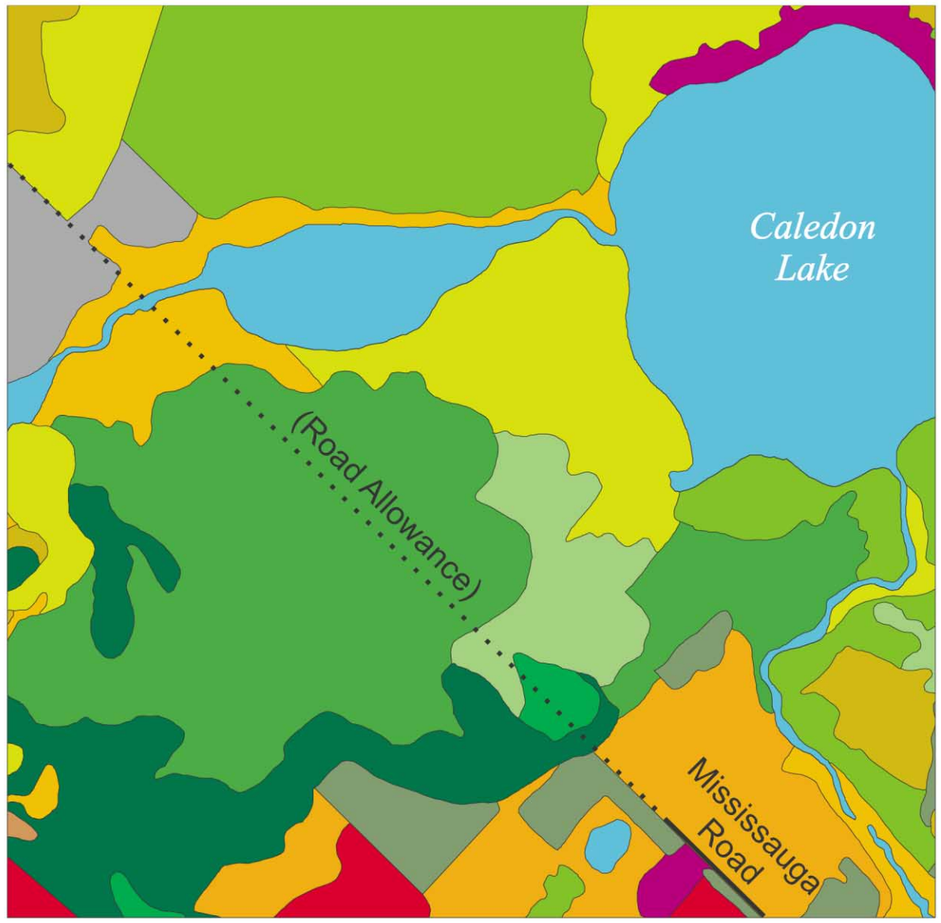


A thematic map displays a geographic data theme (such as forest type) in map form. The above thematic map has been created from the Natural Heritage Project data taken from an aerial photo. In this map, areas of land have been assigned to Ecological Land Classification (ELC) codes that represent actual natural features and land uses in the area around Caledon Lake (e.g. SwC = Coniferous Swamp).
ELC is a process of delineating and classifying ecologically distinctive areas based on geologic, landform, soil, vegetative, climatic, wildlife, water and human factors.



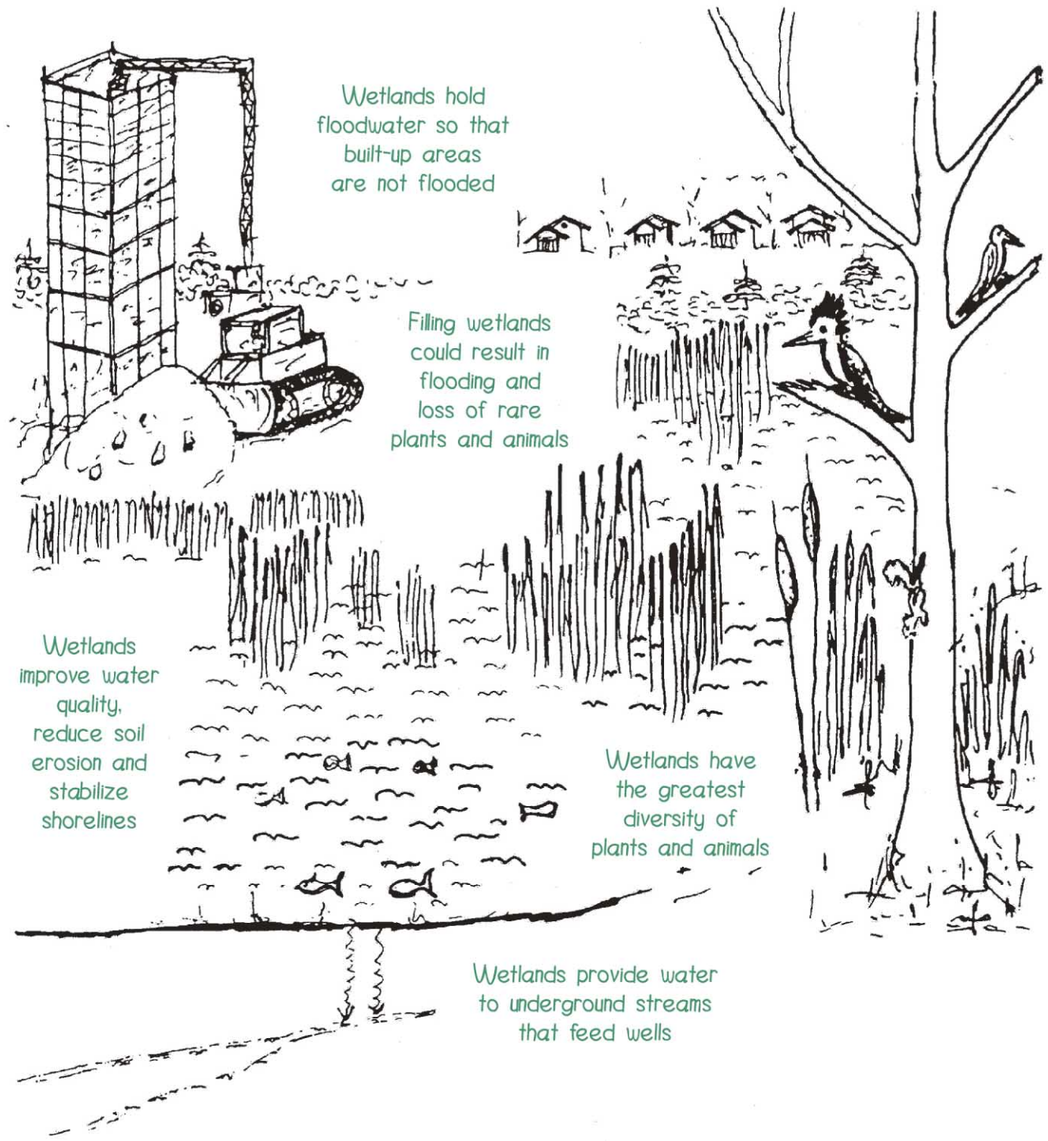
A thematic map created from the Natural Heritage Project data. In this thematic map, different colours have been assigned to represent natural features and other areas (polygons) based upon the ELC code determined for each actual feature.

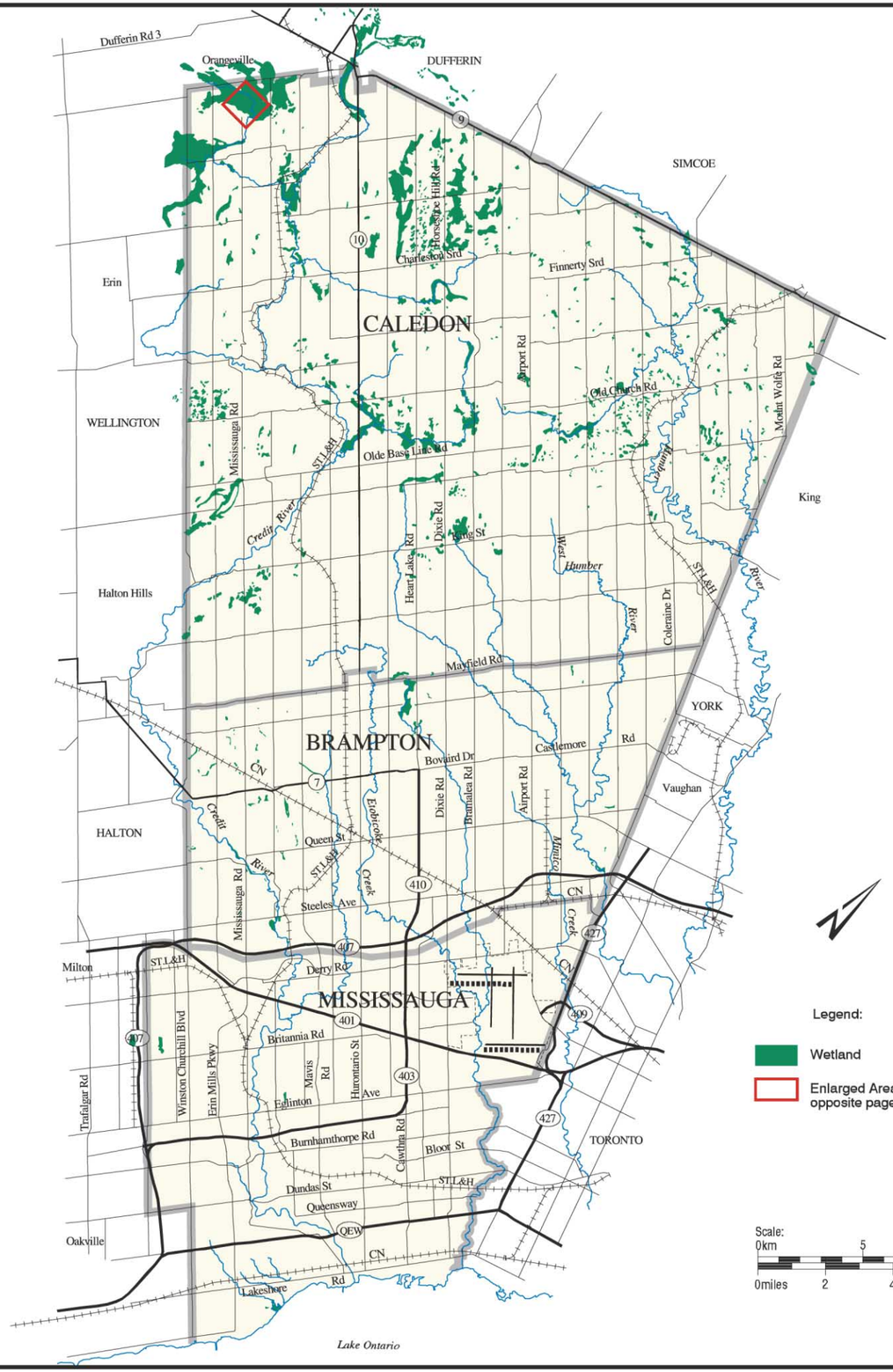
Ecological Land Classification:

CS	Cultural Savannah
CW	Cultural Woodland
FoD	Deciduous Forest
IA	Inactive Aggregate
IAG	Intensive Agriculture
L/P	Lake / Pond
Ma	Marsh
OF	Old Field
PIC	Coniferous Plantation
RD	Rural Development
SwC	Coniferous Swamp
SwD	Deciduous Swamp
SwM	Mixed Swamp
SwT	Thicket Swamp
T	Thicket

Wetlands

Wetlands covered 11 per cent of the land area of the Region prior to European settlement. By 1967, 60 per cent of this had been lost.


Wetlands hold floodwater so that built-up areas are not flooded
Filling wetlands could result in flooding and loss of rare plants and animals
Wetlands improve water quality, reduce soil erosion and stabilize shorelines
Wetlands have the greatest diversity of plants and animals
Wetlands provide water to underground streams that feed wells



The Region of Peel prohibits development in significant wetlands and takes steps to protect all wetlands.

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Historic farming scenes

Three horse team,
the Heard farm, Caledon c. 1920

Elliott barn, near Streetsville, c. 1900

Hay loader, c.1910

Wedgewood farm,
Derry West, c.1910

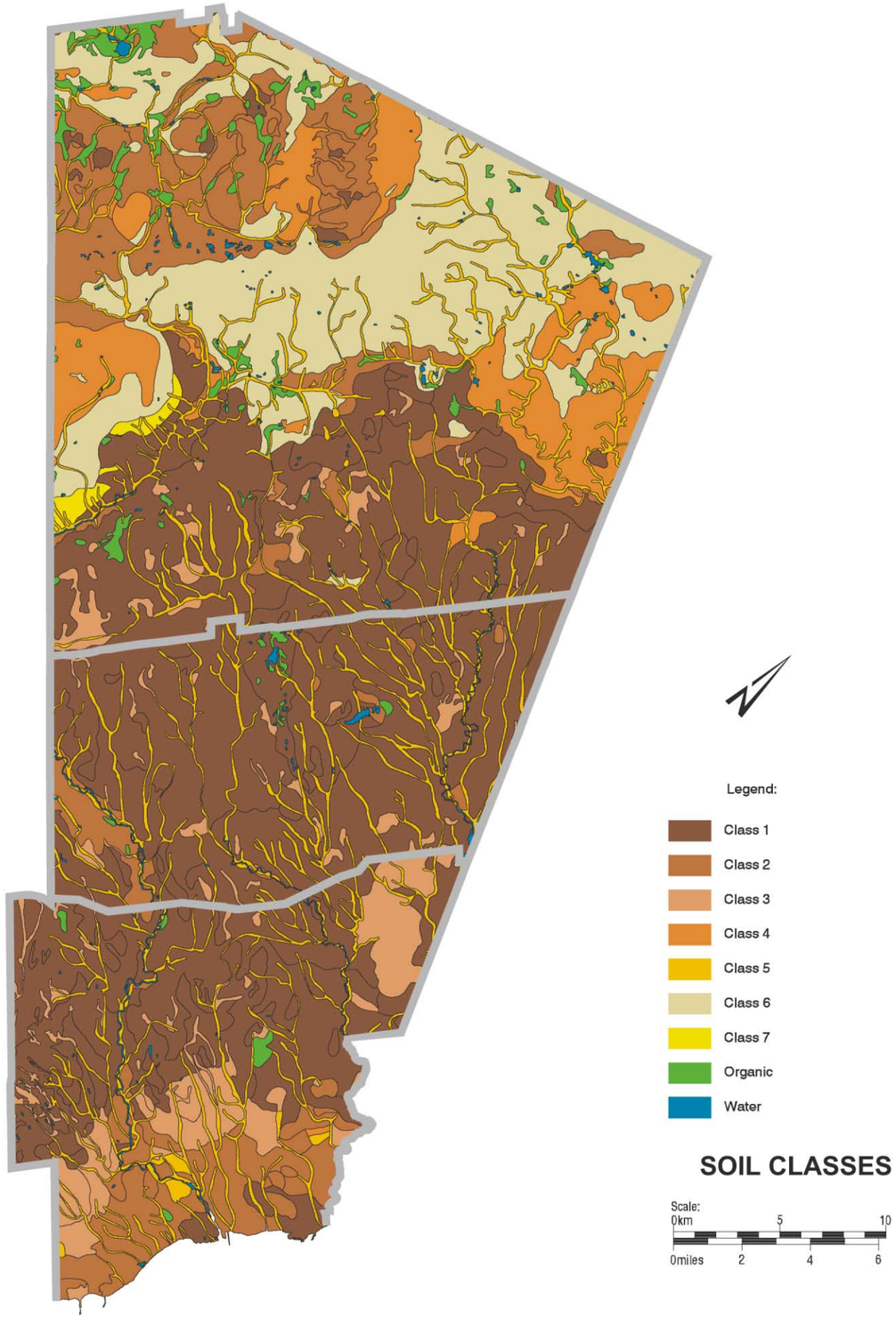
Plowing, c.1910

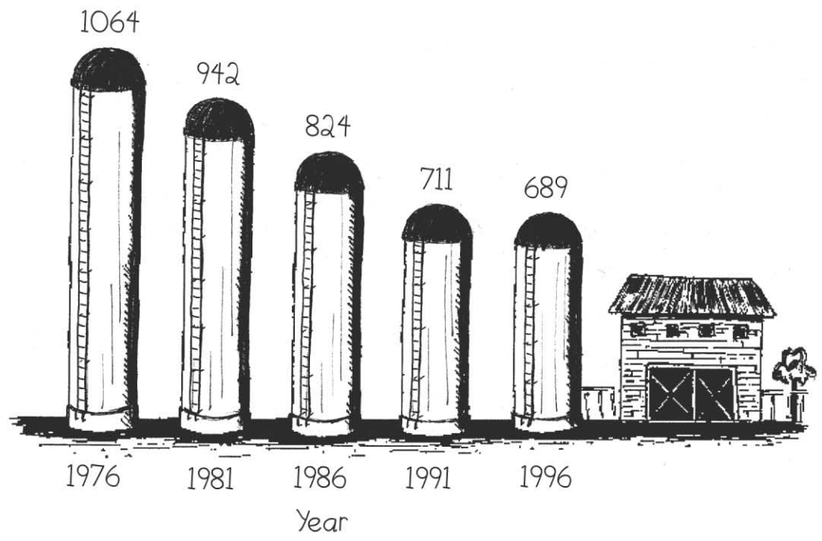
Agriculture/Soils

Despite the fact that Peel Region continues to experience steady urbanization, agriculture remains an important economic activity and way of life. Since around the turn of the century, the amount of agricultural land has generally been in a steady decline in Ontario. Urban areas have been expanding and some marginal farmlands have been abandoned to natural regeneration. Farmland located close to growing urban areas is under pressure for urban development. It is well suited to accommodate urban development as it is cleared of forest, level and well-drained.

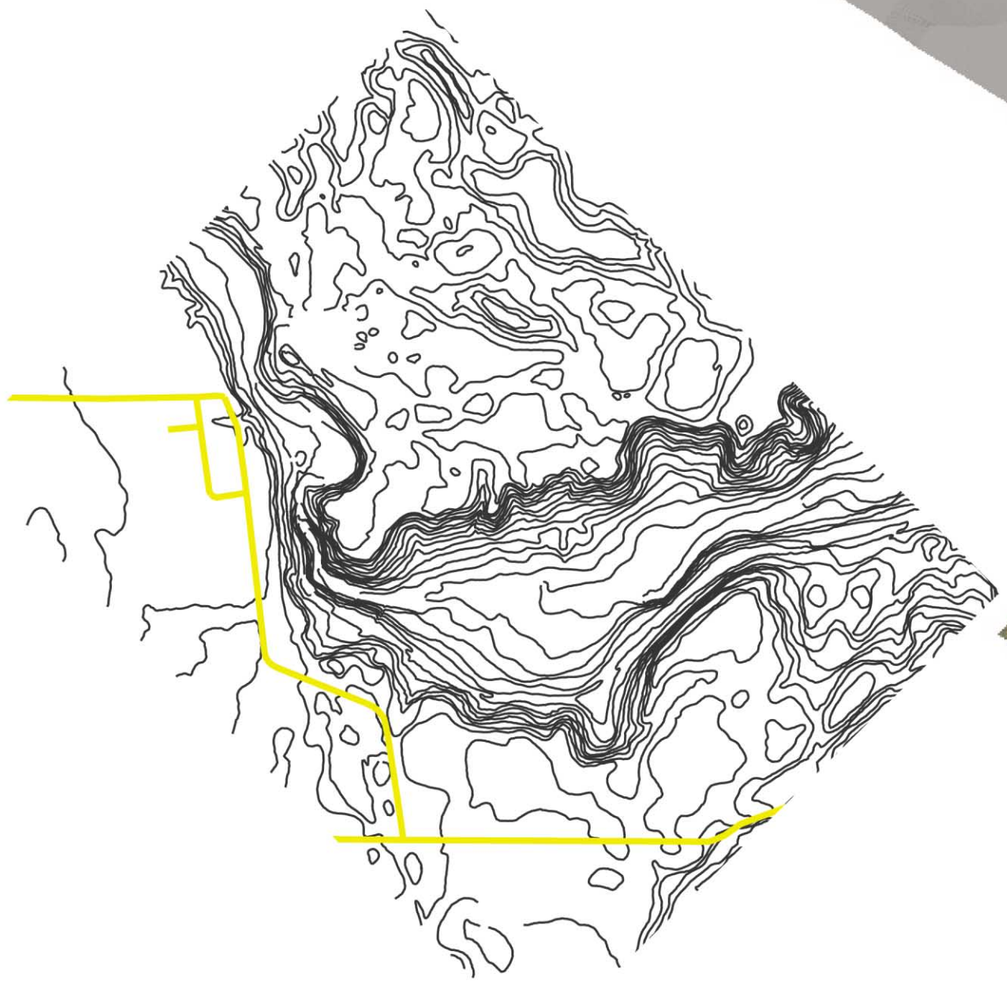
A prime agricultural area is one that has the best soils for agriculture. The best soils are classified as Canada Land Inventory Class 1-3. Only 0.5 per cent of Canada's land is designated as Class 1, and half of this land is located in southern Ontario. The Region of Peel has identified a large part of the remaining prime agricultural land in the Region as Prime Agricultural Area in order to preserve it for agricultural uses. This area includes the majority of the land in the southern part of Caledon, as well as the land outside the urbanized area on the west of Brampton.

Question 2:
If the total area of farms in Peel was 155,507 acres in 1976 and 120,026 acres in 1996, what was the change in the average farm size in the Region over that time period? Answer on page 31.

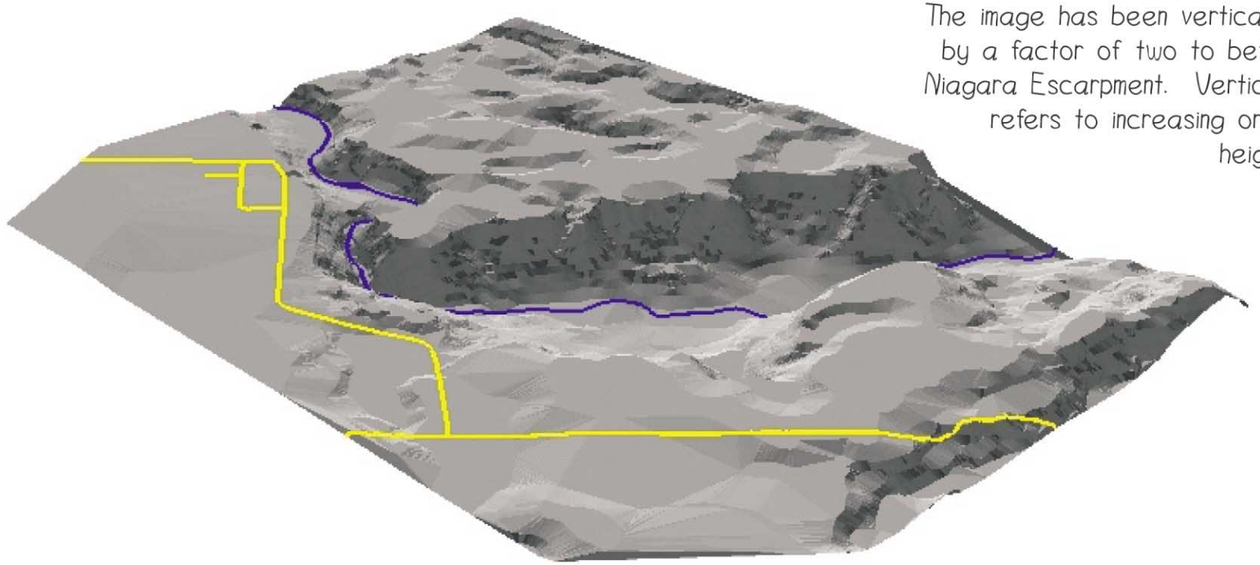




A contour map featuring part of the Niagara Escarpment near the Hamlet of Cataract. Each contour line represents a 5-metre difference in elevation (height).



This is a three-dimensional (3D) plot of the same area. The image has been vertically exaggerated by a factor of two to better highlight the Niagara Escarpment. Vertical exaggeration refers to increasing or decreasing the height in the scene.



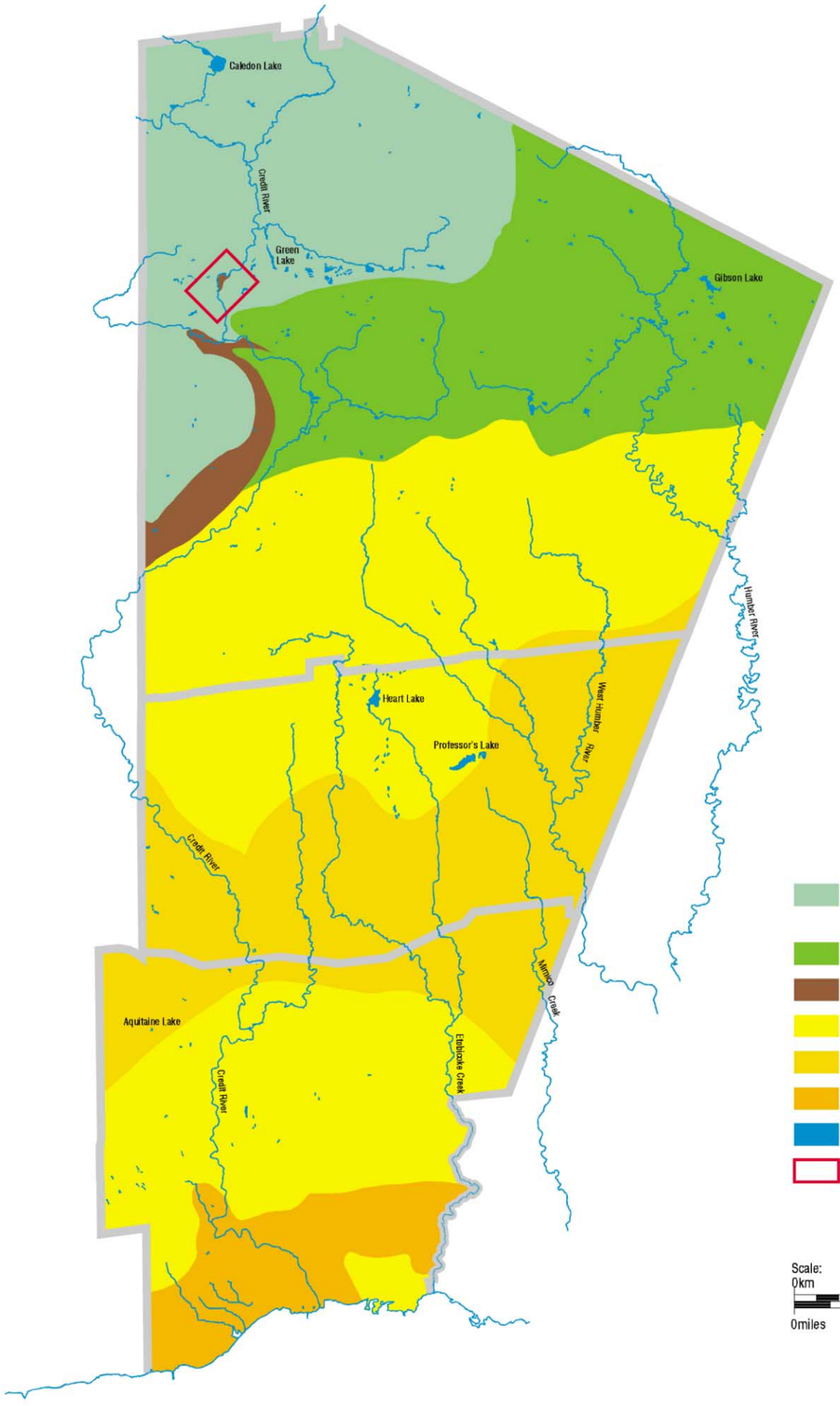
This 3D plot, as shown, has a 1999 ortho-digital photo " draped" over the same area.

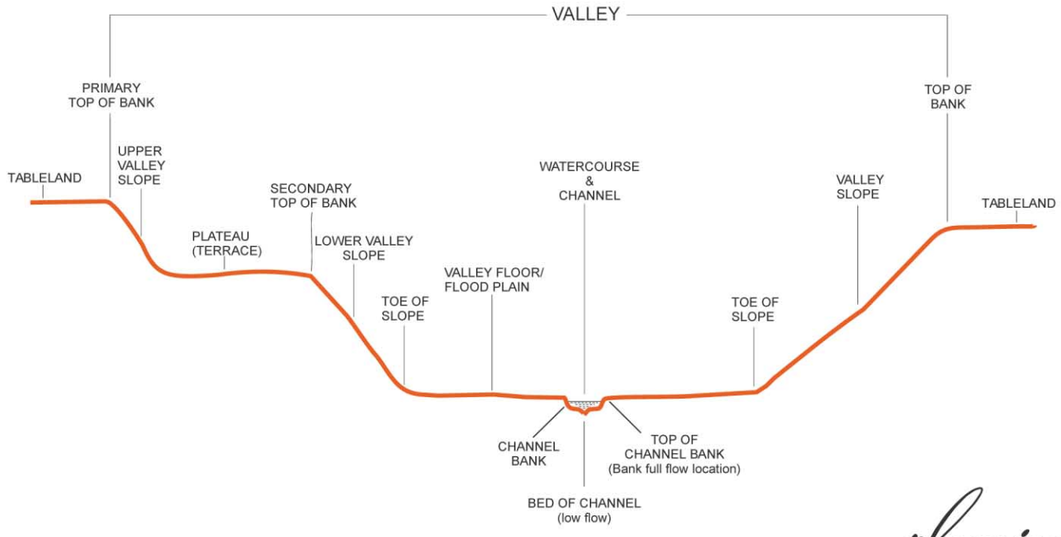
Landform

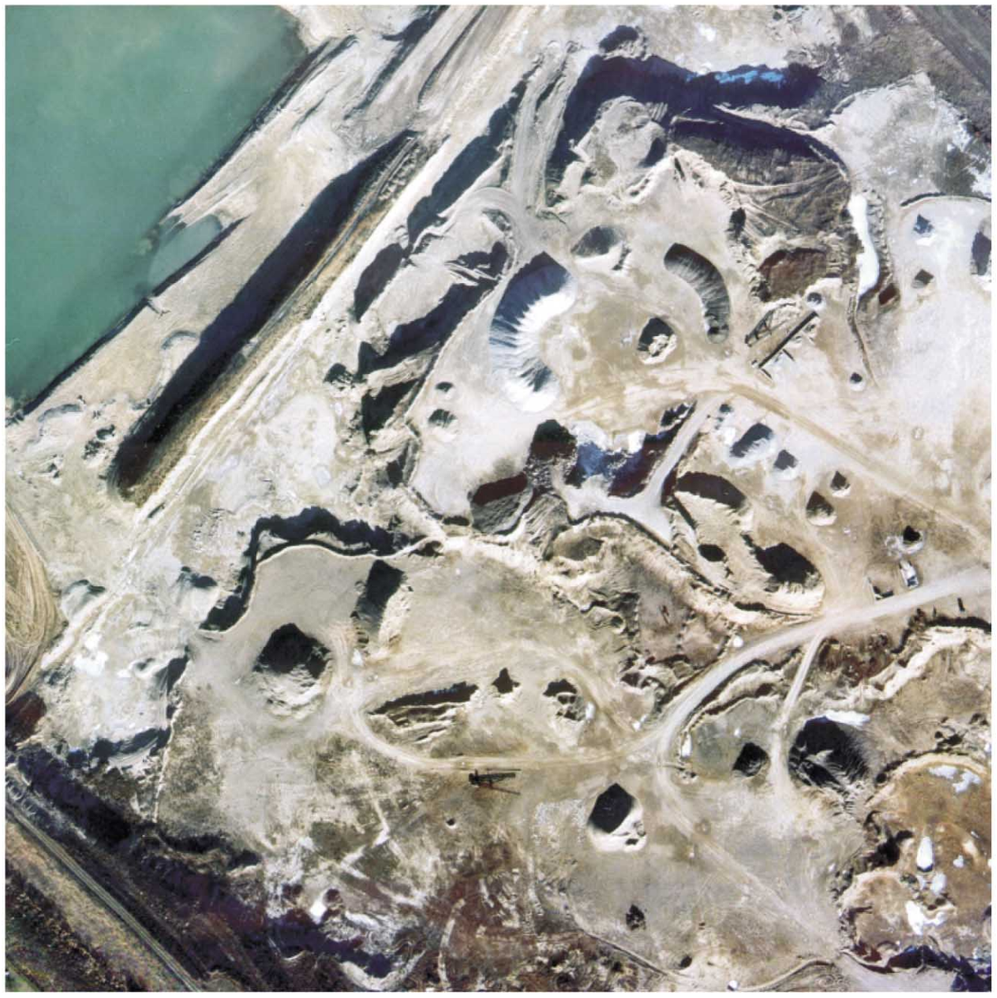
A physiographic region is an area of land that has a similar landform, topography, geology and soils. The natural landscape of Peel Region is the result of the action of glaciers that once covered southern Ontario. The physiography of Peel has a significant influence on the present Regional planning issues, including protection of distinct landforms and landscapes, as well as the sustainable use of mineral aggregate and agricultural resources.

The bedrock of the Niagara Escarpment survived erosion by glacial action to produce a landform of significant ecological and scenic value. The Niagara Escarpment is also the source of many rivers, and provides places to live for many plant and animal species. The action of moving ice and water resulted in deposits of mineral aggregate material varying from sand to boulders. The Oak Ridges Moraine is a massive ridge of sand and gravel that performs essential ecological functions, including the recharge and storage of groundwater. The Peel Plain, South Slope and Iroquois Plain are high quality agricultural areas that are under development pressure or have been developed for urban uses.

The valley corridors of the Credit and Humber Rivers, and the Etobicoke and Mimico Creeks represent distinct scenic landforms that cut across the plains of the Region and provide essential natural corridors for wildlife.







This ortho-digital aerial photograph of a sand and gravel pit shows the dramatic effects of mineral aggregate extraction on the natural landscape. This pit is located on the Brampton Esker, a long twisting ridge of sand and gravel that has been replaced by lakes and houses. Once extraction is complete, the area shown will also be redeveloped into parks, lakes and residential neighbourhoods.

Highway 410 divides a residential neighbourhood from a sand and gravel pit extracting materials that are used in constructing the highway. Digital residential lot boundaries are outlined in yellow on top of the ortho-digital aerial photograph.

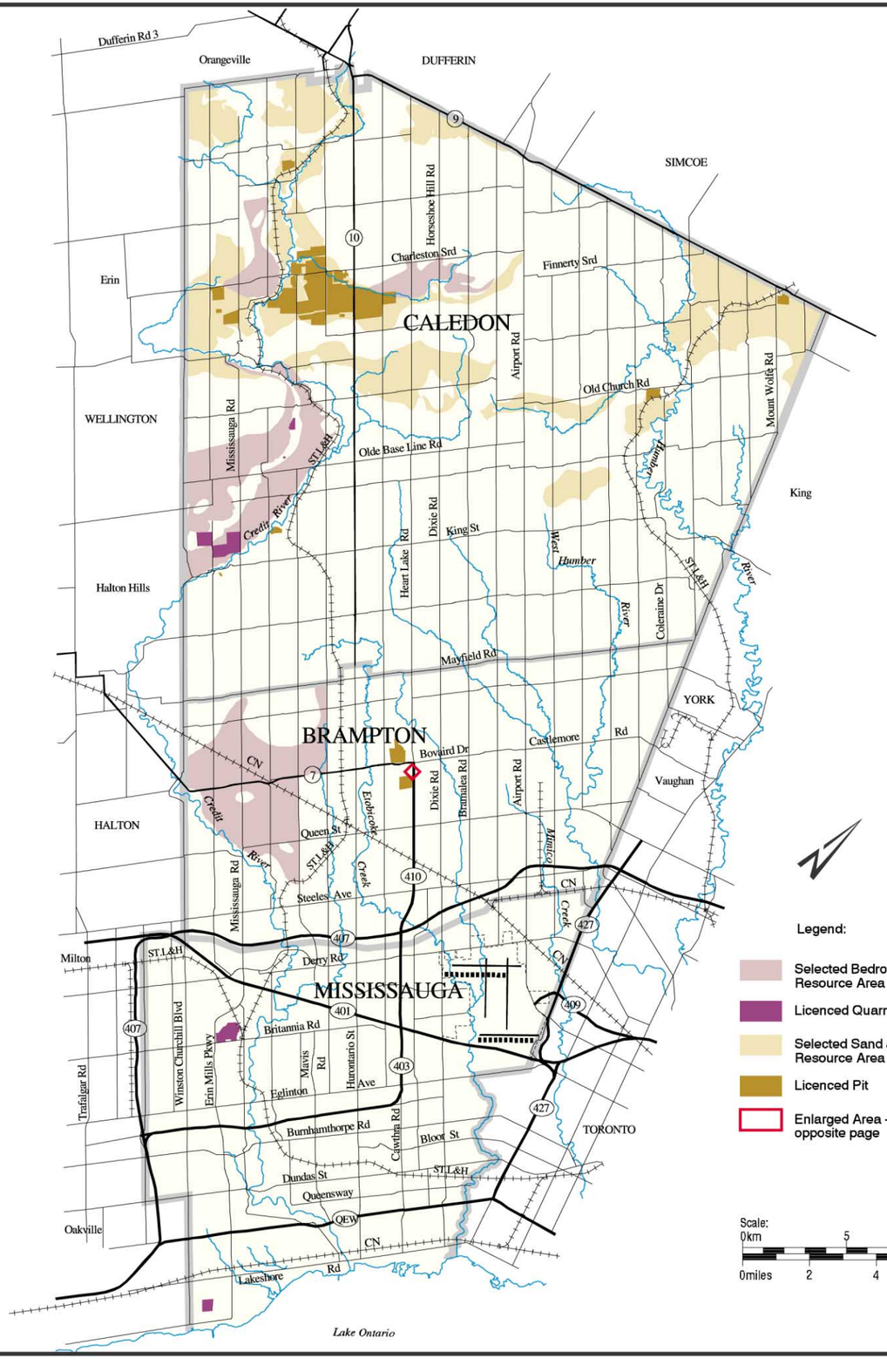
Ortho-digital technology is used to scan photographs into a single, accurate and seamless digital image.

Geology/Mineral Aggregates

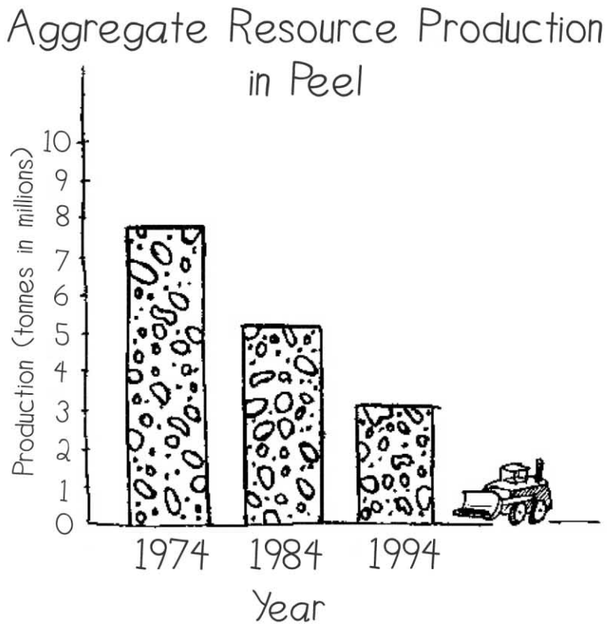
Mineral aggregates include sand, gravel, bedrock, and other materials. It is a non-renewable resource that can only be found in certain areas. In Peel, bedrock can be found primarily on the Niagara Escarpment, and sand and gravel on the Oak Ridges Moraine.

Mineral aggregate resources are important in many forms of construction. Limestone from the Niagara Escarpment is used in concrete, and shale is used to make bricks. Sand and gravel are important to road building.

Extracting aggregate from the ground can result in damage to the natural environment. Environmental concerns include impacts on groundwater, and land resources such as soils and agriculture. Loss of vegetation, and aggregate operations, can make it hard for wildlife to survive. Uses of aggregate resources to protect the environment include fine-grained sand to treat sewage and purify water supplies, and lime to filter air pollutants from smokestacks.



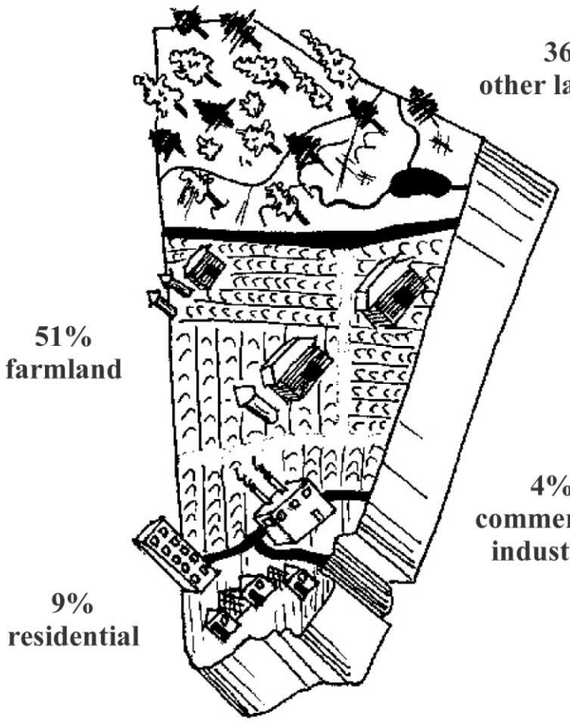
Pit: A site from which sand and gravel (unconsolidated material) is extracted.
Quarry: A site from which bedrock (consolidated material) is extracted.

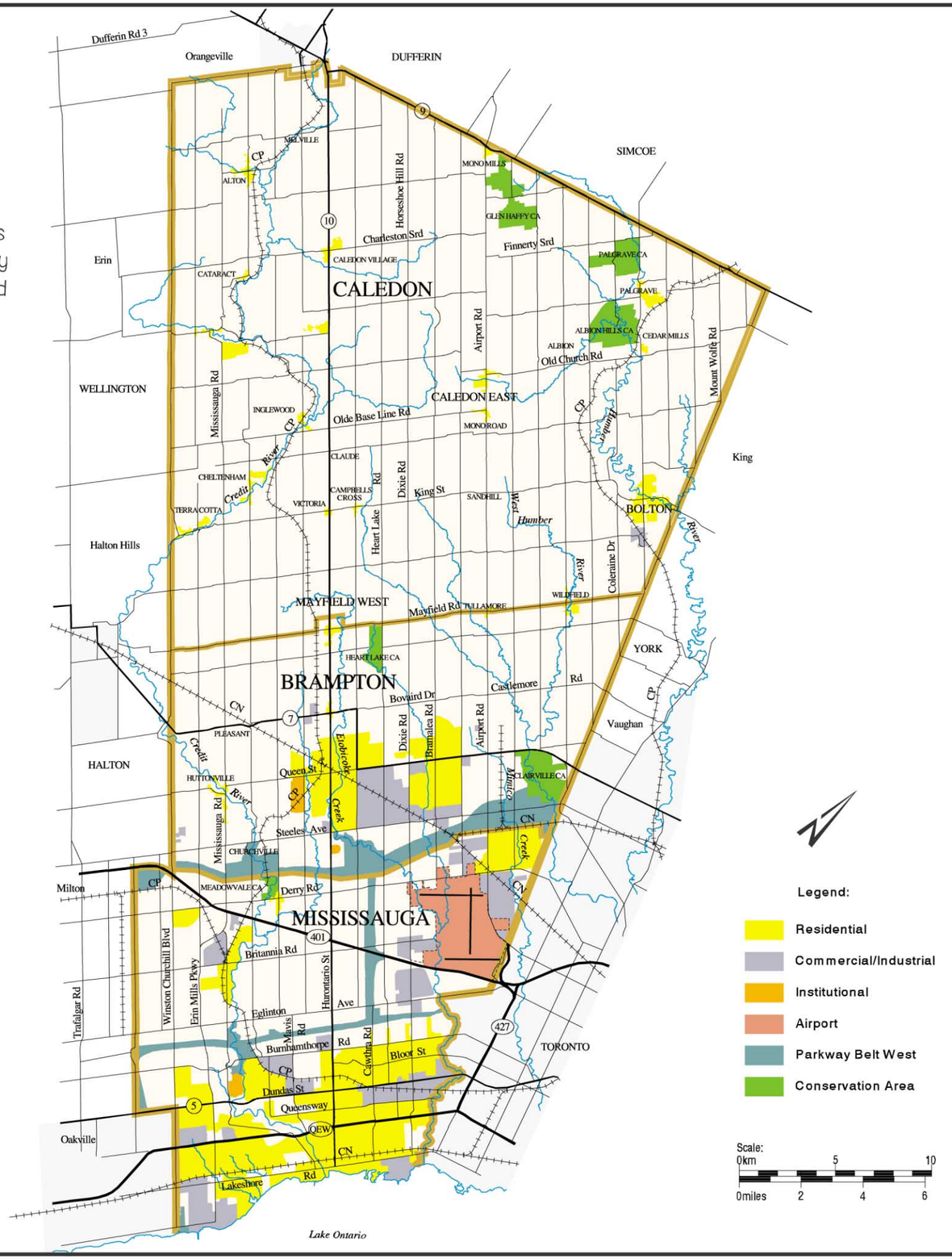


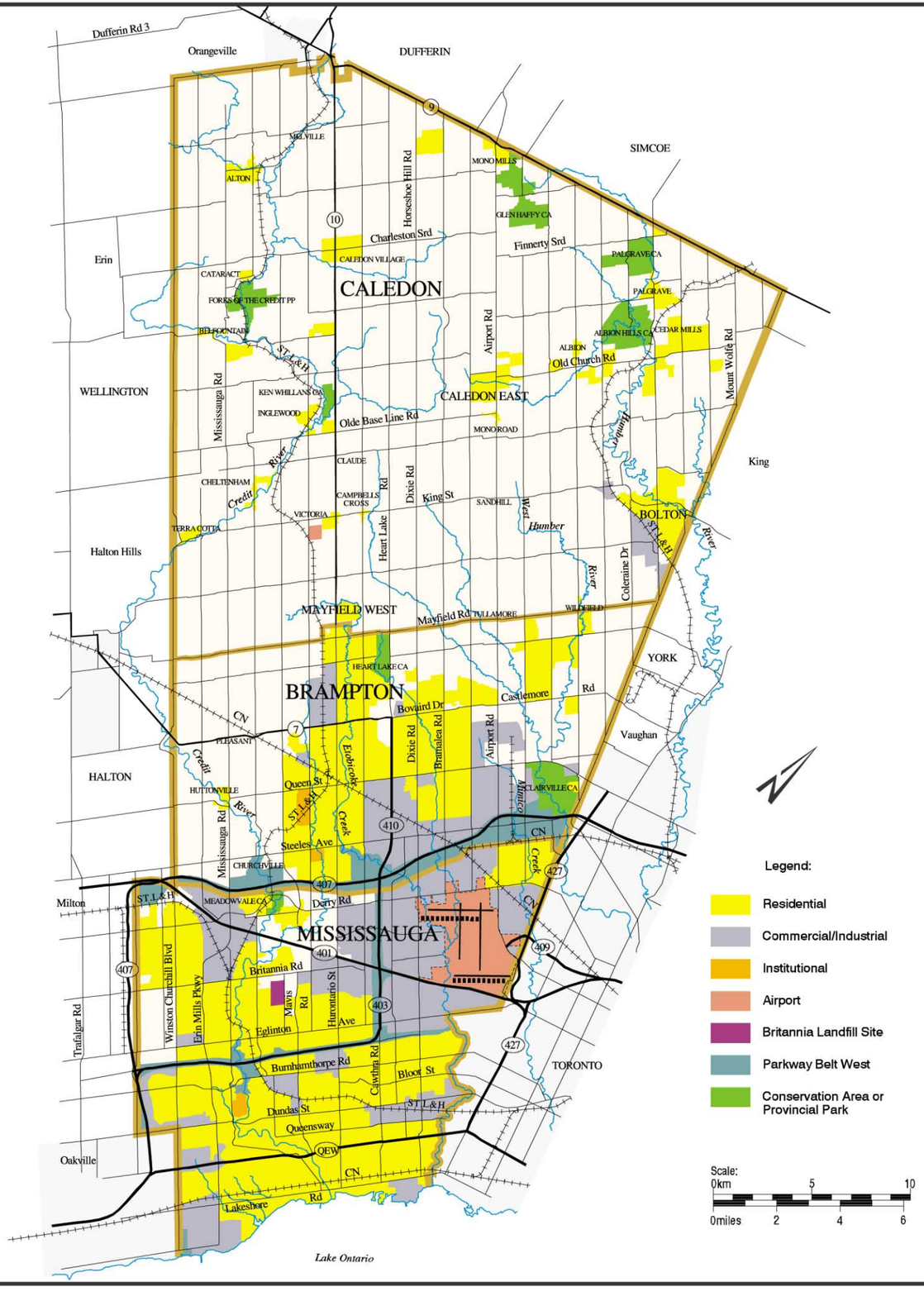
Land Use 1974

The pattern of land use in Peel reflects its distinctive urban and rural character. Twenty-five years ago, residential areas were limited to the expansion of historic villages, such as Port Credit, Brampton and Streetsville, as well as "new towns" such as Erin Mills and Bramalea. Employment was concentrated in established areas served by railways, and newer areas conveniently located next to the airport. Much of the land suitable for agriculture was still farmed but, especially in Mississauga was under a lot of development pressure. In Caledon, much of the land unsuitable for farming was covered in forests, wetlands and other natural areas. Historic villages and hamlets, such as Alton and Inglewood dotted the landscape.

Percentage of land use in Peel, 1974





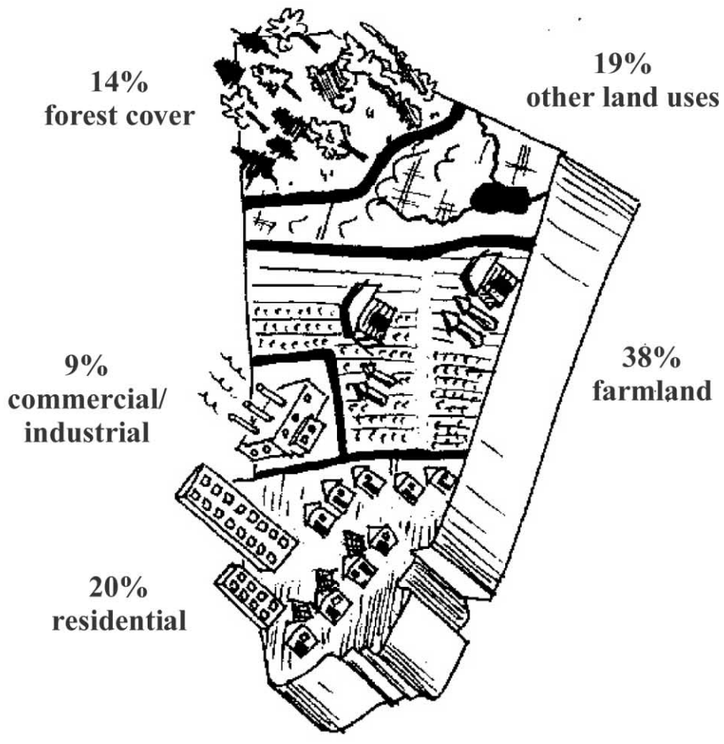


Land Use 1999

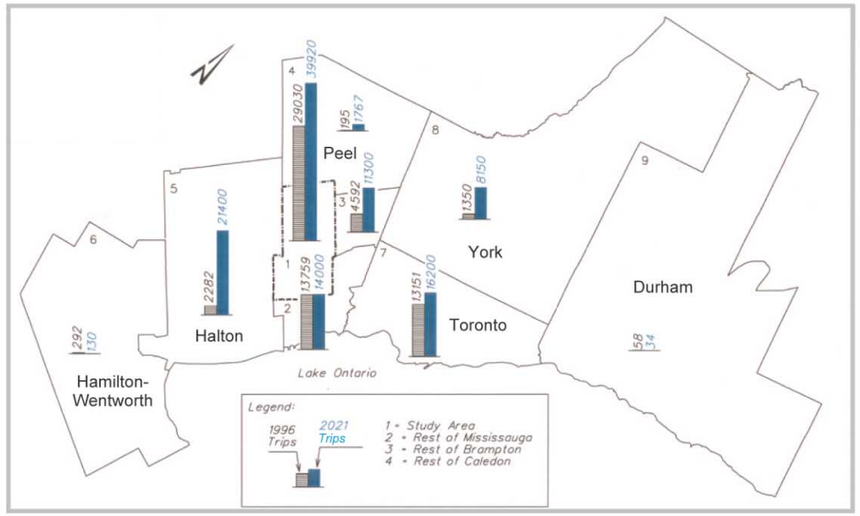
Today, most of the southern portion of the Region is occupied by large residential and employment areas, served by an extensive provincial highway and major road network. Peel has evolved from a residential suburb of Toronto to a mature urban area with a strong employment base. Residential areas have developed in northern Mississauga and northwest and southeast of the Brampton core. New employment areas have developed in areas close to the expanding airport and provincial highways, including the corridor extending west from the airport between Highways 401 and 407.

Much of the land in Caledon and some in Brampton can still be described as rural, containing farms, forests, villages and hamlets. In Caledon, residential land use has extended to Mayfield West and the Palgrave estate residential community. Employment activities include farming, recreation and mineral aggregate resource extraction. Industrial employment is located in Bolton.

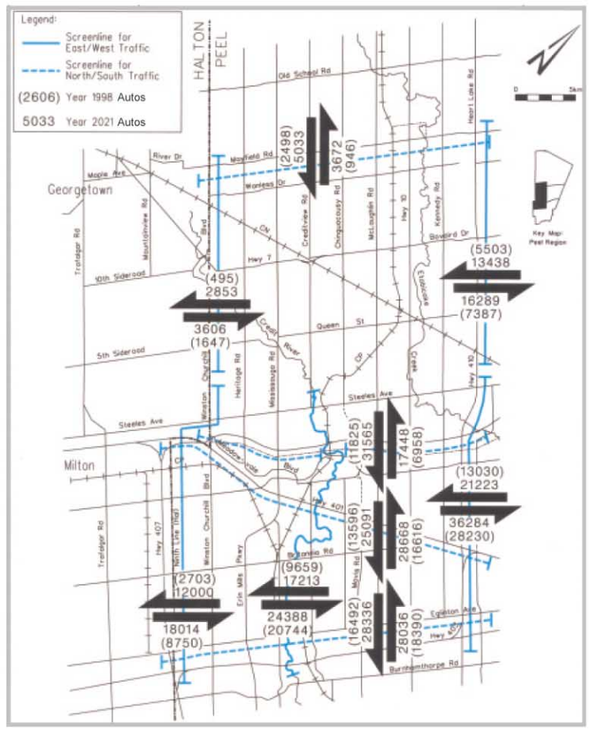
Percentage of land use in Peel, 1999



Aerial photograph showing the interchange of highways 407 and 410.



This figure shows the number of people making trips from west-central Peel to other areas in Peel and to other Regional Municipalities in the Greater Toronto Area (GTA). The striped bars represent actual trips made between 7:30 a.m. and 8:30 a.m. in the year 1996. The solid blue bars are forecasted trips, expected in the year 2021 for the same time period.



This map shows the major roads in the west-central area of Peel Region. The blue lines are called "screenlines". These are imaginary lines which normally follow municipal boundaries or geographical features such as rivers. The numbers shown in brackets are the number of vehicles using the roads crossing a particular screenline in the a.m. peak hour (7:30-8:30 a.m.) For 1998. The figures without brackets are the forecasted vehicle trips for the year 2021. The arrows represent the direction in which the vehicles are travelling. For example, an arrow pointing to the right indicates an eastbound direction and an arrow pointing to the top of the page represents a northbound direction.

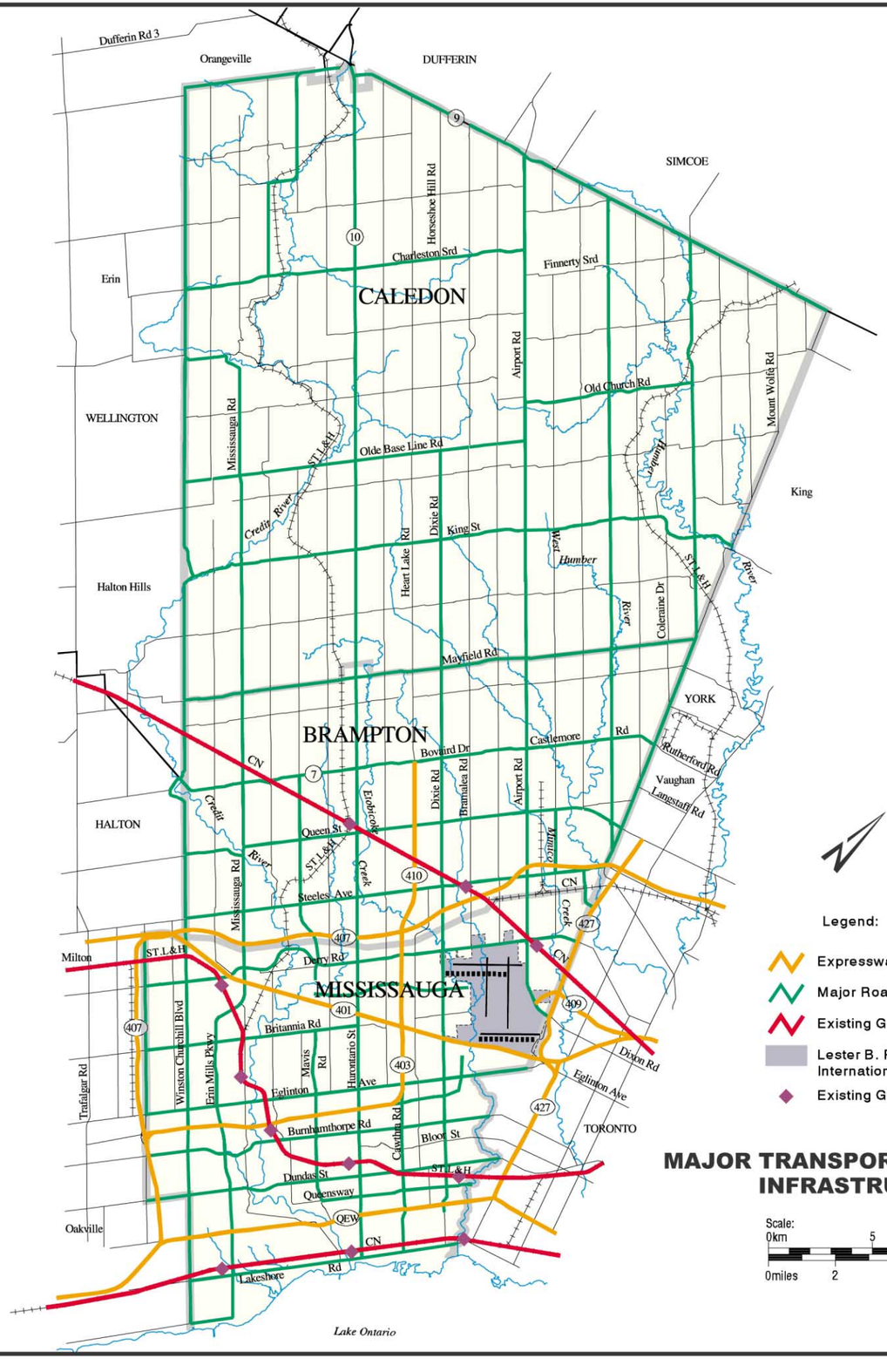
Question 3:
How many vehicles enter Peel Region from the west during morning peak hour? Answer on page 31.

Transportation

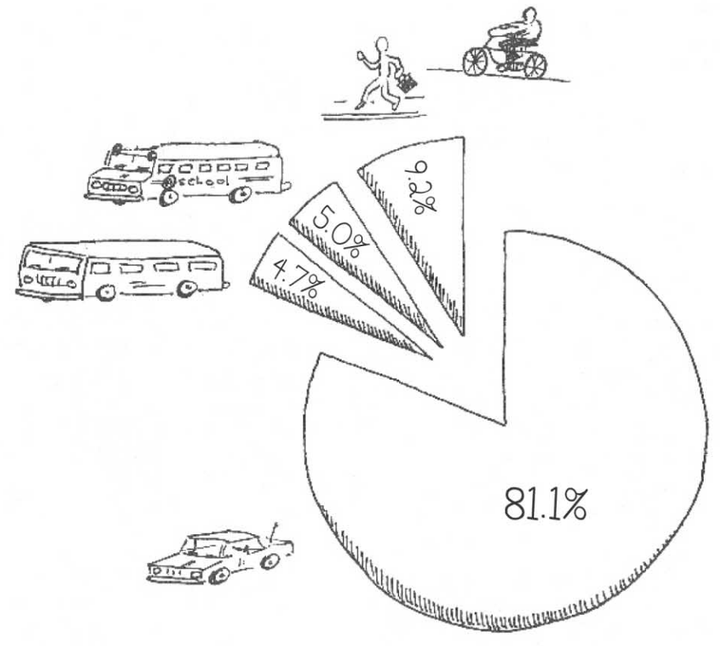
Peel Region has experienced significant change over the past 25 years. Population growth, economic growth and job creation, and a resulting increase in urban activities has influenced how people travel, how often, and when they travel.

For example, travel survey results reveal that in 1986, 1.2 million trips were made to destinations in Peel Region every weekday. By 1996, this figure had risen to 1.63 million an increase of 36 per cent.

Automobile travel is the dominant mode of transportation in Peel. Other modes include public transit, school buses, walking and cycling.



Trips made to destinations in Peel Region, 1996
Morning peak period, 6-9



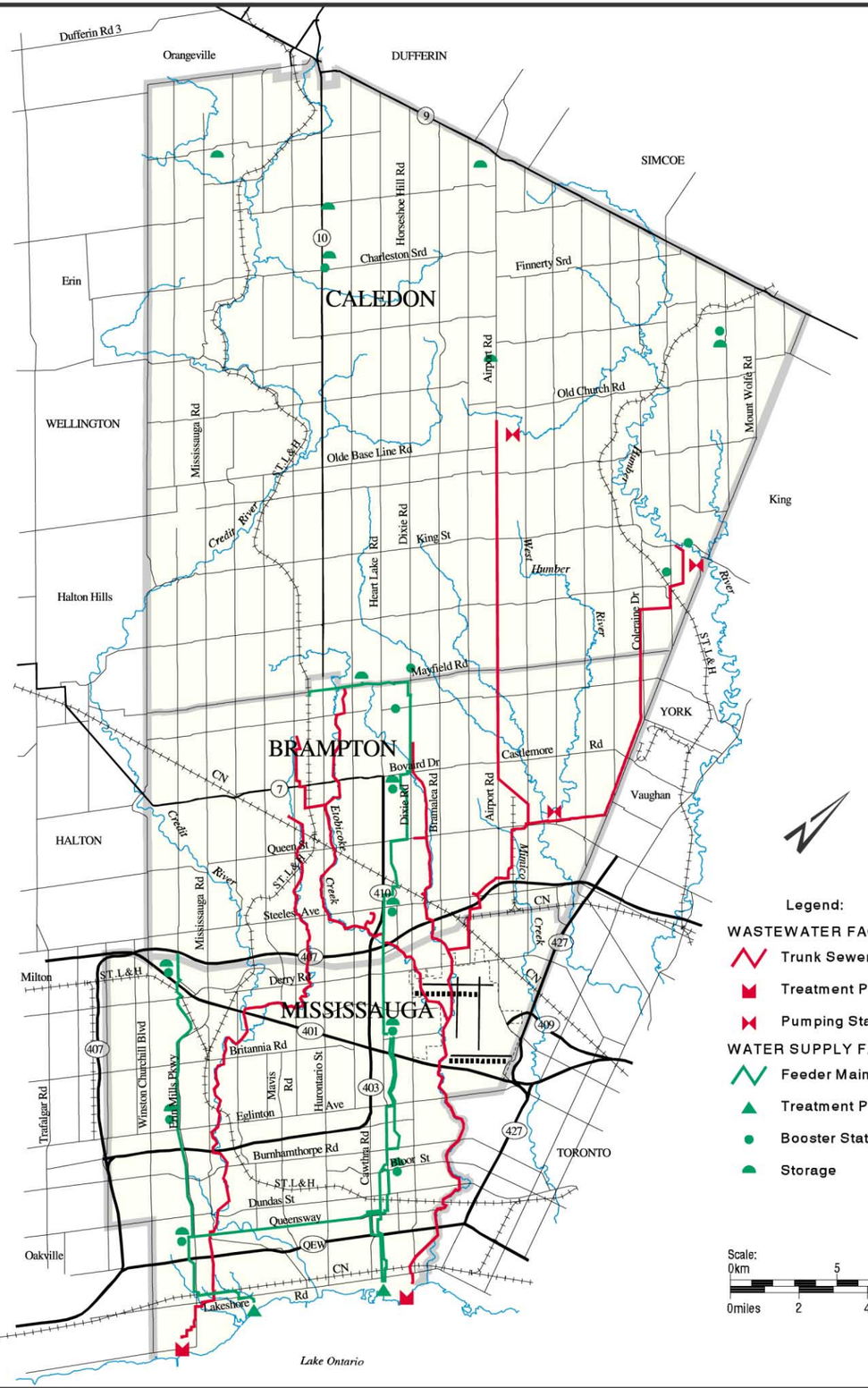
planning Peel

Lakeview Water Treatment Plant:
This plant has a current treatment capacity of 560 million litres of water per day (MLD). Its planned capacity in the 1999 Water and Wastewater Servicing Master Plan of the Region of Peel is 1,150 MLD based on projected population growth. The Region also operates the Lorne Park Water Treatment Plant that has a capacity of 210 MLD.

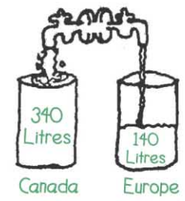
Question 4:
An average sized backyard swimming pool holds about 83,000 litres of water. How many swimming pools could the daily treatment capacity of the Lakeview Water Treatment Plant fill?
Answer on page 31.

Lakeview Wastewater Treatment Plant:
This plant has a current treatment capacity of 336 million litres of wastewater per day (MLD). Future expansion will increase its treatment capacity to 520 MLD. The Lakeview plant services the east drainage area of the Region, while the Clarkson Treatment Plant (not shown) services the west drainage area. The Clarkson plant has a current treatment capacity of 163.5 MLD. Future expansion will increase its treatment capacity to 272.5 MLD.

Water/Wastewater Services

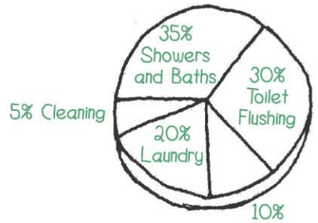


Water and Wastewater



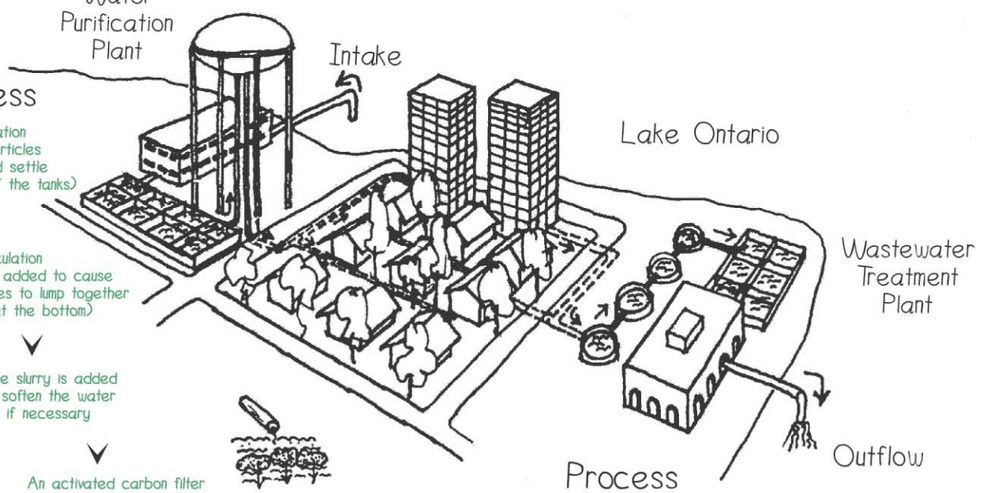
Daily consumption of water per person

Indoor Use



Water consumption increases to 500 litres per day in summer

Water Purification Plant



Process

Sedimentation
(heavier particles such as sand settle at the bottom of the tanks)

Flocculation
(Chemicals are added to cause suspended particles to lump together and settle at the bottom)

Lime slurry is added to soften the water if necessary

An activated carbon filter removes harmful chemicals and unpleasant odours, tastes and colours

Sand filters remove any remaining suspended particles

Chlorine is added to kill disease-causing bacteria

Fluoride is added to prevent tooth decay

Process

Primary Treatment
(removes solids in settlement tanks)

Secondary Treatment
(removes organic material in aeration tanks)

Tertiary Chemical Treatment
(removes phosphates and disease-causing bacteria)

View of the Britannia Sanitary Landfill Site:
This facility receives most of the over 200,000 tonnes of waste landfilled at Regional sites each year.

KMS Peel Energy From Waste (EFW) Facility:
This facility disposes of approximately 95,000 tonnes of waste per year and provided 50 million kilowatt hours of energy from waste to Peel users in 1999 (85 per cent of its total energy production).

Recyclable material:
The Region of Peel is establishing several Community Recycling Centres throughout the Region to handle between 50,000 and 60,000 tonnes of recyclable material.

View of the Britannia Hills Golf Course:
Areas of the landfill site that are no longer receiving waste have been redeveloped into an 18-hole golf course, Britannia Hills.

Waste Management

WASTE GENERATION

The manufacture of 1kg
of consumer goods also
produces 5kg of waste

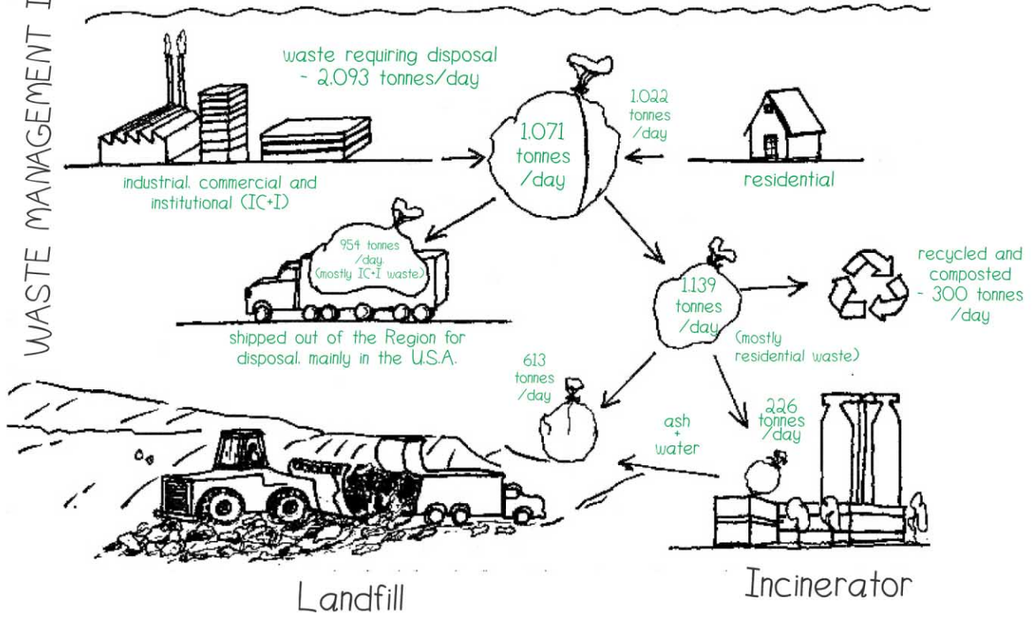
If everyone on earth
lived like the average Canadian
we would need at least FOUR EARTHS
to provide all the materials
and energy we currently use

WASTE MANAGEMENT IN PEEL

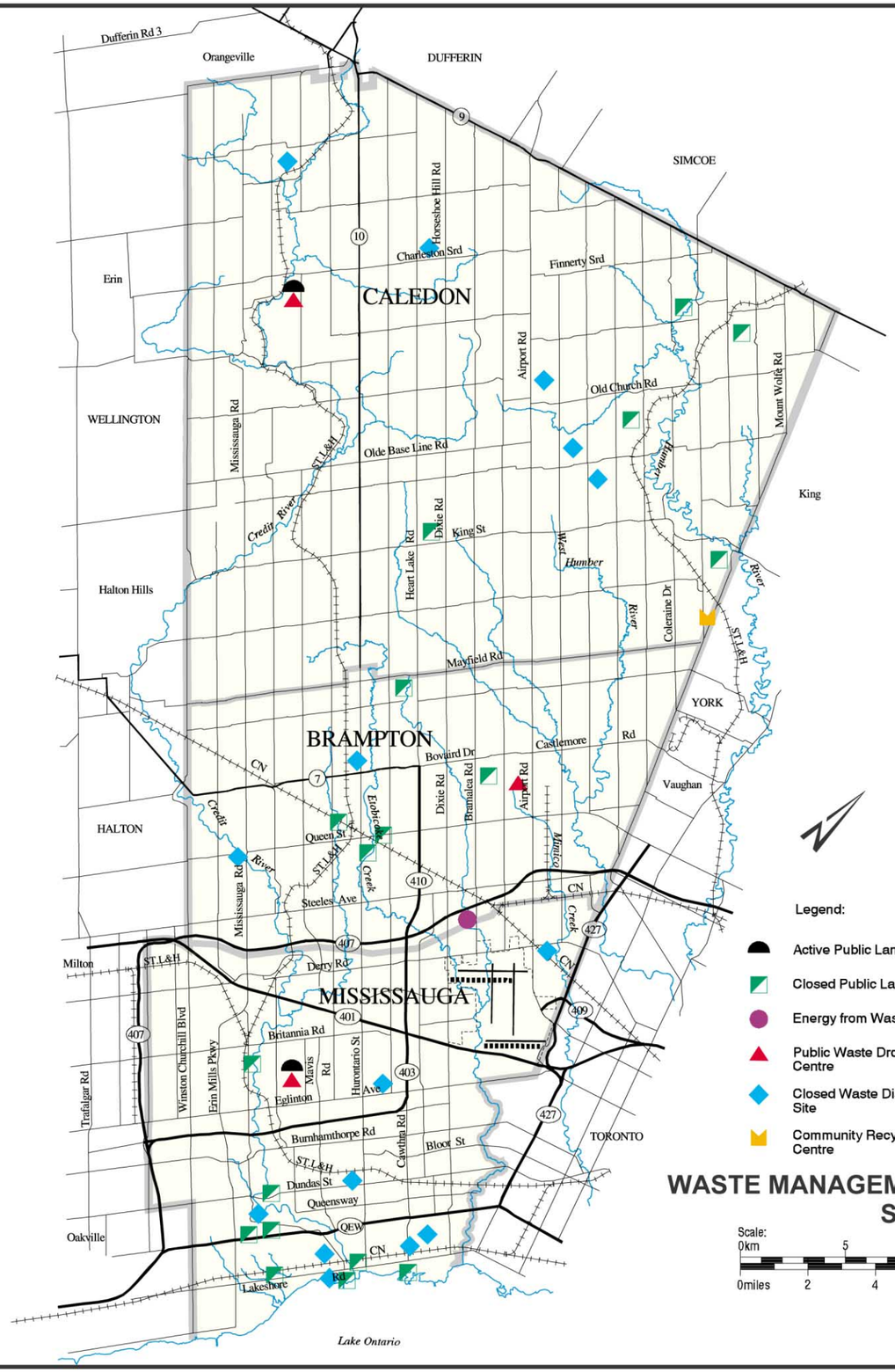
Reduce
- Manufacturers could reduce waste by improving the manufacturing process
- Consumers could reduce waste by buying products that have little or no packaging or last longer

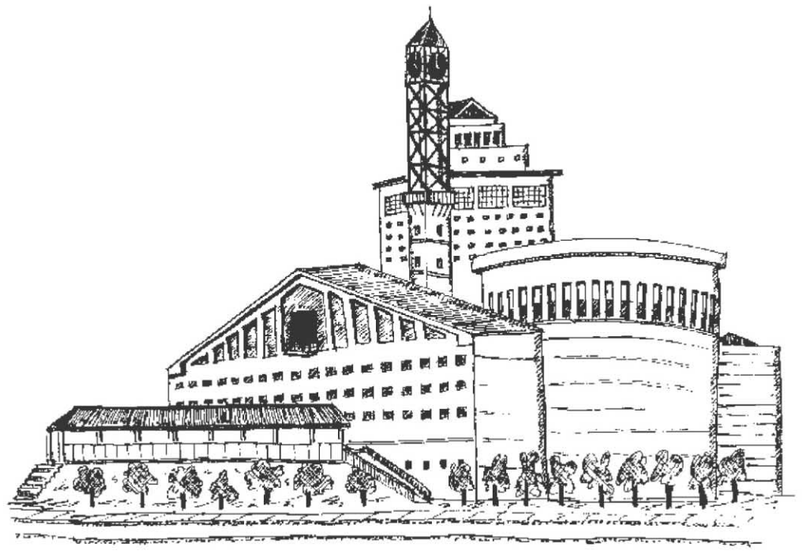
Reuse
- Use refillable containers
- Reuse shopping bags and packaging
- Reuse is far better than recycling as it saves energy and resources

Recycle
- Requires energy to collect and transport materials to recycling centres
- Requires energy and resources to process used materials

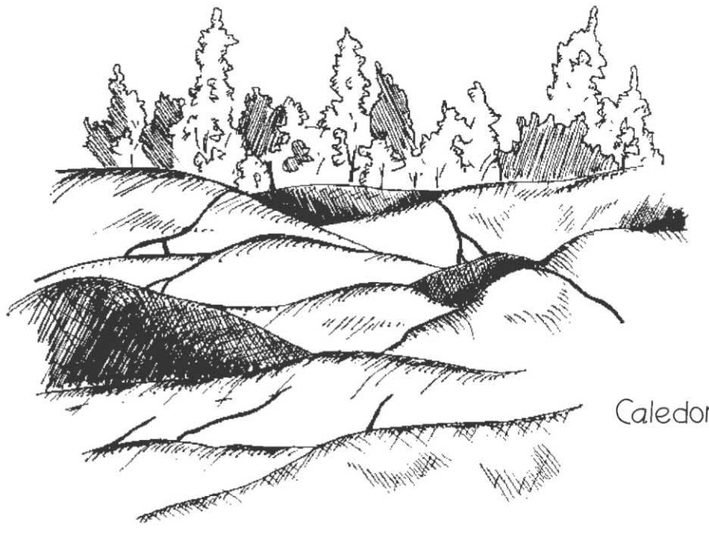


Question 5:
The Region disposed of 2,72,784 tonnes of residential waste in 1999 that was generated by a population of 933,000.
How many kilograms of waste did the average Peel resident produce in 1999?
Answer on page 31.





Mississauga Civic Centre



Caledon Badlands

Landmarks Map Legend:

Provincial Park / Conservation Areas
1 Forks of the Credit PP
2 Belfountain CA
3 Ken Whillans CA
4 Glen Haffy CA
5 Palgrave CA
6 Albion Hills CA
7 Heart Lake CA
8 Claireville CA
9 Meadowvale CA

Natural Heritage
10 Badlands
11 Rattray Marsh
12 Cawthra Bush

Municipal Offices
13 Peel Region Centre
14 Caledon Municipal Offices
15 Brampton City Hall
16 Mississauga Civic Centre

Educational Institutions
17 Sheridan College
18 University of Toronto, Erindale Campus
19 Peel District School Board
20 Dufferin-Peel Separate School Board
21 Natural Science School, Britannia Farm

Hospitals
22 William Osler Health Centre/
Brampton Memorial Hospital Campus
23 Credit Valley Hospital
24 Trillium Health Centre

Justice Institutions
25 Peel Court House
26 Peel Regional Police
27 Ontario Correctional Institute
28 Vanier Correctional Institute

Cultural Centre
29 Peel Heritage Complex
30 Living Arts Centre
31 Bramalea Civic Centre

Major Shopping Centres
32 Trinity Common Retail Centre
33 Bramalea City Centre
34 Shoppers World Mall
35 Orion Gate
36 Meadowvale Town Centre
37 Erin Mills Town Centre
38 Square One
39 Eaton Sheridan Place
40 Heartland Centre
41 Dixie Value Mall
42 South Common Mall

Entertainment or Recreation
43 Wild Water Kingdom
44 Centre for Sports and Entertainment
45 Hershey Centre
46 Chinguacousy Park
47 Lakefront Promenade
48 International Centre
49 Lionhead Golf Course
50 Osprey Valley Golf Course
64 Britannia Hills Golf Course

Major Business
51 Sheridan Park
52 Dupont/Syntex
53 Glaxo
54 Petro Canada Refinery
55 Daimler-Chrysler
56 Northern Telecom
57 Zellers
58 Canadian Tire
59 Husky

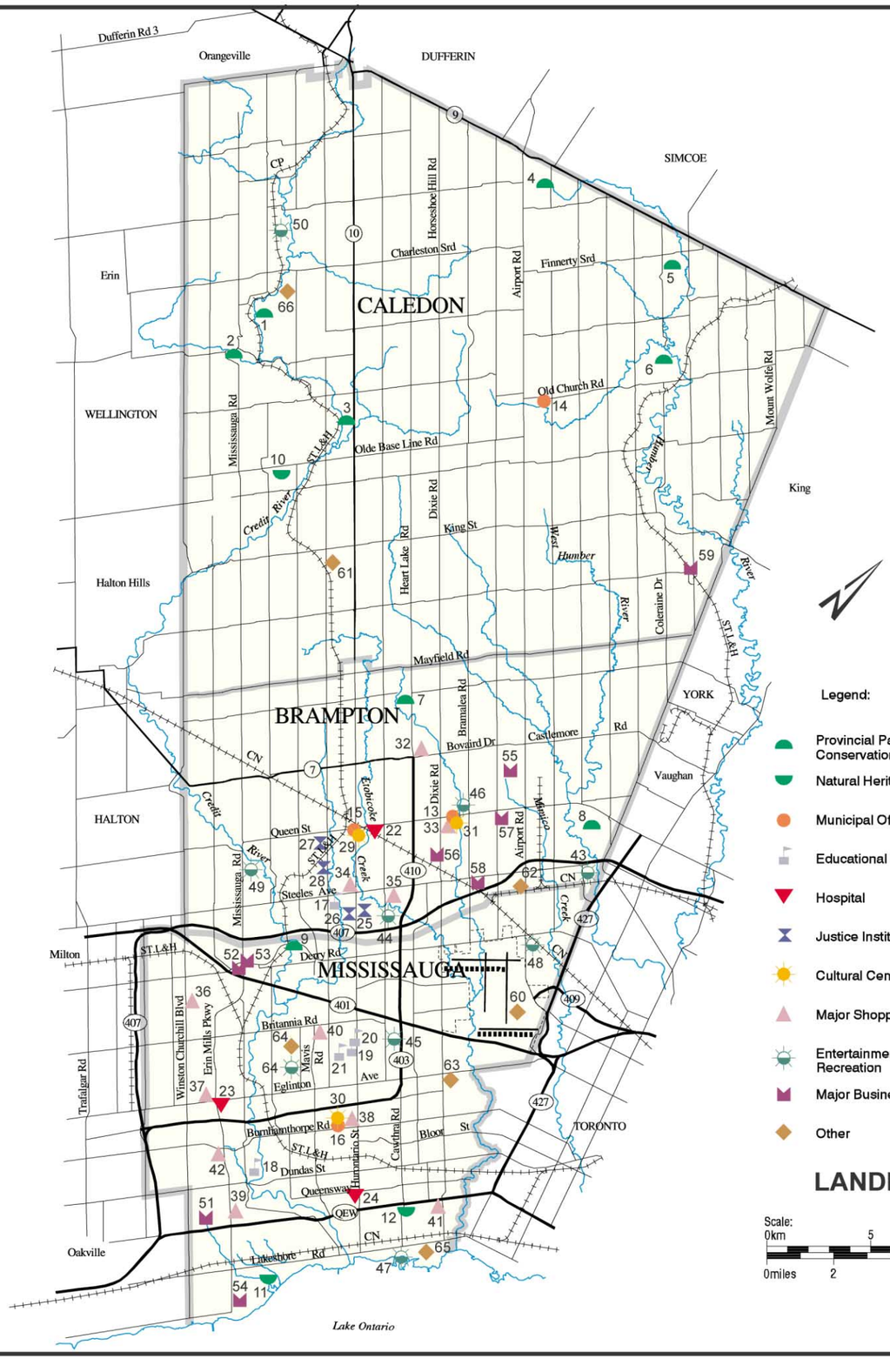
Other
60 Lester B. Pearson International Airport
61 Brampton Airport
62 MTO John Rhodes Centre
63 Gateway Postal Facility
64 Britannia Sanitary Landfill Site
65 Lakeview Generating Station
66 Caledon Sanitary Landfill Site

Landmarks

Landscape is a term used to describe the character of the land surface that has resulted from an interaction of physical processes and human activity. A place is defined by distinct characteristics. Location means where a place is (absolute location) and where it is relative to other places (relative location).

A landmark is a distinct physical, natural or human-created feature of the landscape. It can describe the character of a place and explain the relationship of places to one another.

Important landmarks such as theatres and arts centres are the focus of cultural activity. Institutions such as hospitals and government offices serve as civic landmarks. Major shopping centres are gathering places, and along with recreation centres and entertainment complexes are places for fun and leisure. Other important landmarks in Peel Region include major educational institutions, businesses, golf courses, conservation areas, and airports.

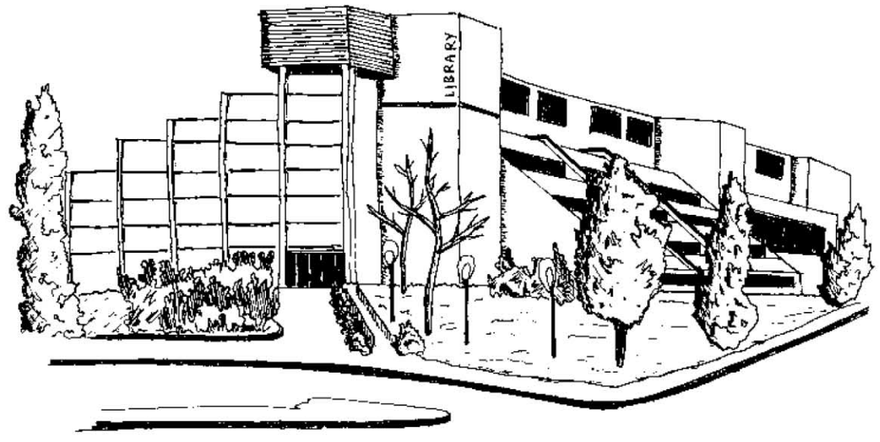


Legend:

- Provincial Park/ Conservation Area
- Natural Heritage
- Municipal Office
- Educational Institution
- Hospital
- Justice Institution
- Cultural Centre
- Major Shopping Centre
- Entertainment or Recreation
- Major Business
- Other

LANDMARKS

Scale:
0km 5 10
0miles 2 4 6

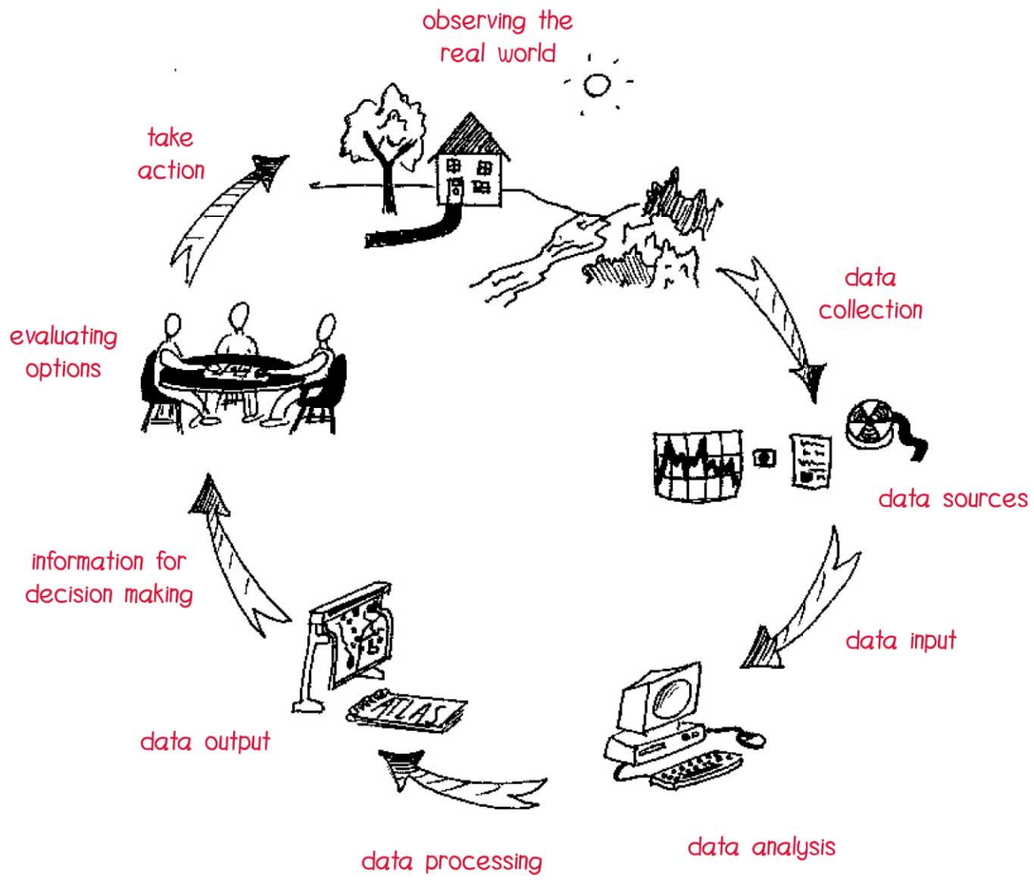


Bramalea Civic Centre

planning Peel

Geographic Information System

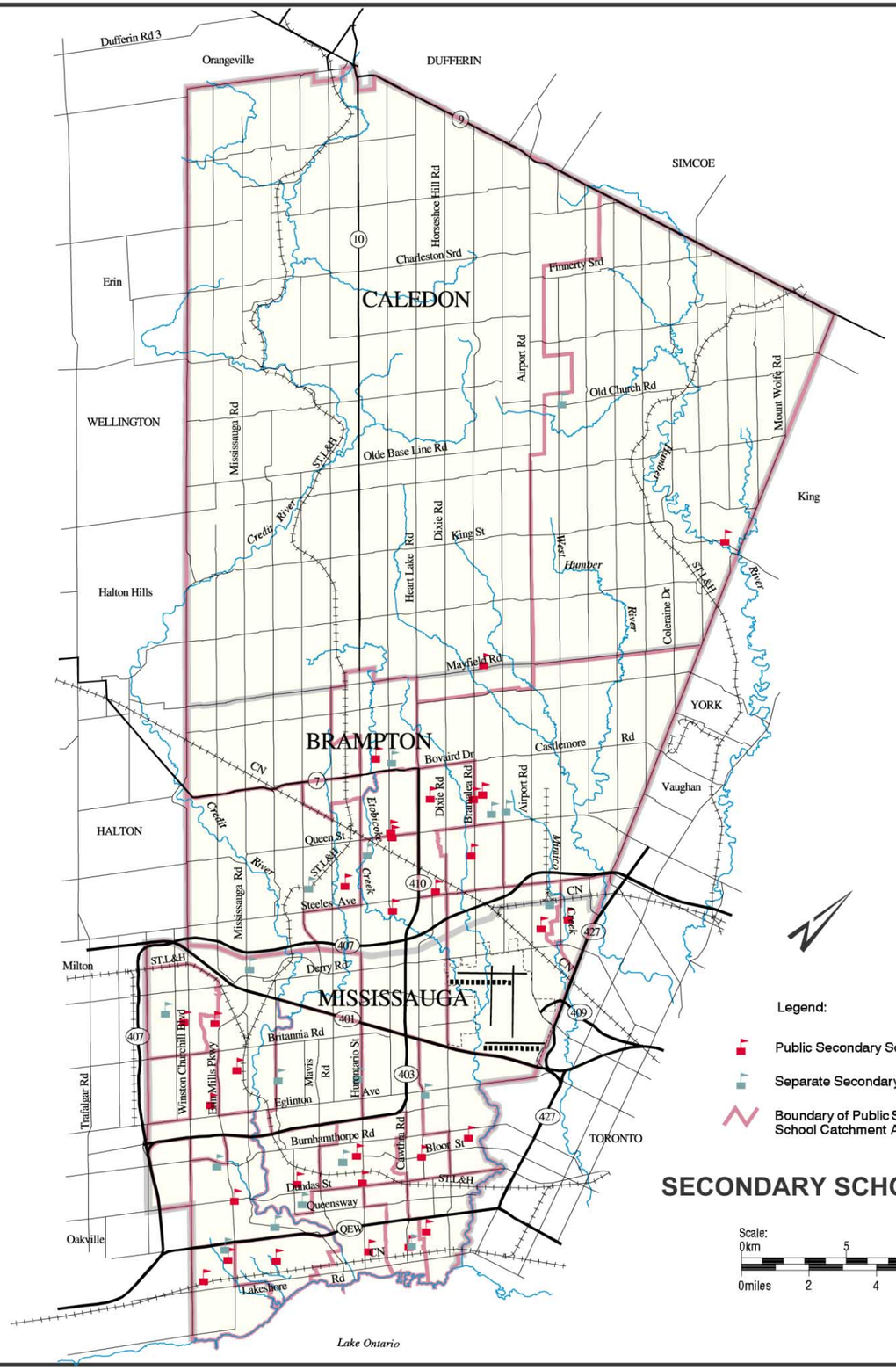
What is a GIS? Geographic Information System (GIS) can be described as a computer system that can hold and use information about places on the earth's surface. A GIS is a system of computer hardware, software and geographic or spatial data designed to collect, store, update, manage, analyze and display all kinds of information that can be related (or geographically referenced) to the earth's surface.



Typical stages in a planning process

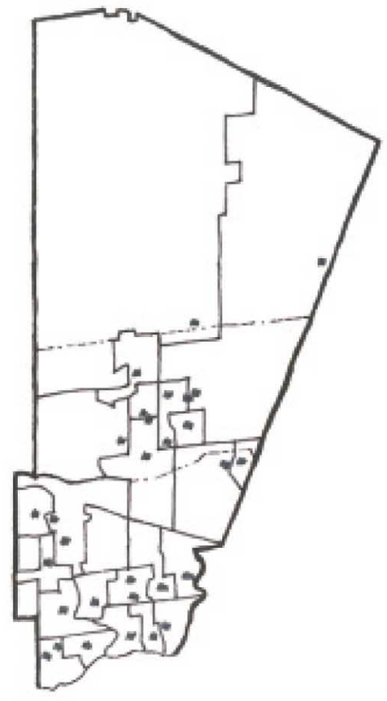
In a GIS, different types of geographic data (themes) are stored as separate layers in the system, and can be placed on top of each other for spatial analysis or the creation of a map. For example (see below), data regarding the location of each secondary school in Peel (point), the location of the major roads within the Region (line), and the Peel District School Board secondary school catchment areas and municipal boundaries (area), have been combined to produce a map. See opposite page.

Output map of Secondary Schools in Peel.



GIS can be used to delineate school catchment area boundaries by combining data on demographics, school capacity and enrolment with geographic data such as the locations of schools, street network and administrative boundaries. The first map, below, shows the catchment areas and locations of public secondary schools in 1979, when the enrolment was 29,381. The second map shows the readjusted catchment areas and locations of public secondary schools in 1999, when the enrolment was 35,897.

Public Catchment Areas and Public Secondary Schools in 1979



Public Catchment Areas and Public Secondary Schools in 1999

planning Peel

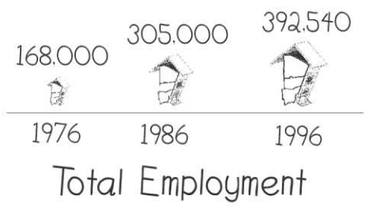
Growth of the Region

Population and Employment Growth

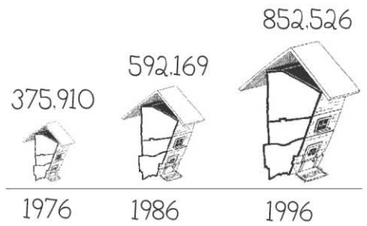
Over the past 25 years, there has been a major increase in the number of people living and working in Peel Region. Peel's population represents a very diverse cultural mix. Both population and employment in the Region in 1996 were more than double what they were twenty years earlier. In 1996, Peel Region contained 850,000 people, more than 18 per cent of the total population of the Greater Toronto Area. Over the next 25 years, the total population of the Region is expected to grow to 1.3 million people.

Land Development

This level of population growth has resulted in the development of a large amount of land for urban uses. In 1974, the built-up area of the Region was limited to southern Mississauga (around such historic villages as Port Credit), Streetsville, Malton (next to the airport), central Brampton, and Bolton. Today, the built-up area has grown to include almost all of Mississauga, and much of Brampton. Regional and local planning efforts are aimed at directing most of the growth in Caledon to the major centres of Bolton, Caledon East and Mayfield West.



Total Employment



Total Population

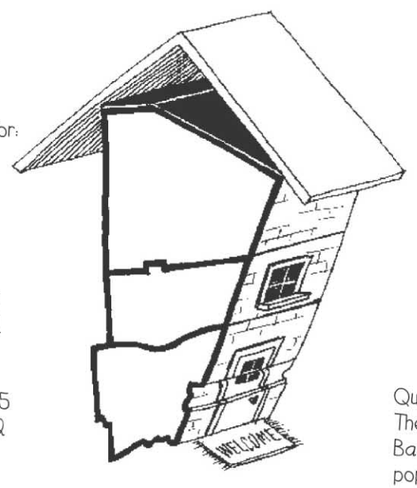
The number of people living in Peel Region has more than doubled since it was founded 25 years ago

Total Population for:

Caledon
1976 22,434
1996 39,893

Brampton
1976 103,441
1996 268,251

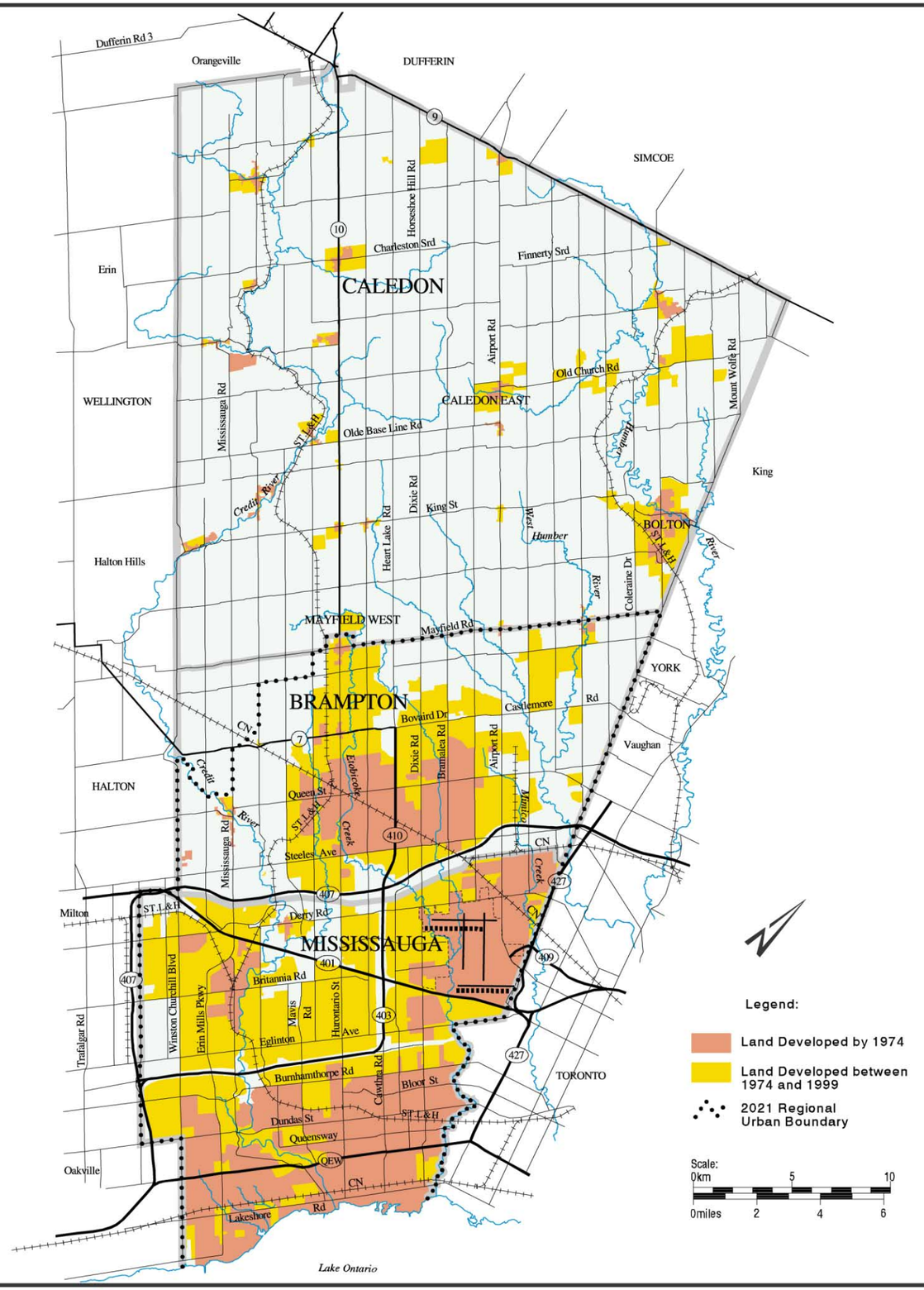
Mississauga
1976 250,035
1996 544,382



Peel

1976: 375,910 People
1996: 852,526 People

Question 6:
The total area of Peel Region is 1,255.5 square kilometres. Based on the 1996 Census population, what is the average population density of the Region? Answer on page 31.



Acknowledgments

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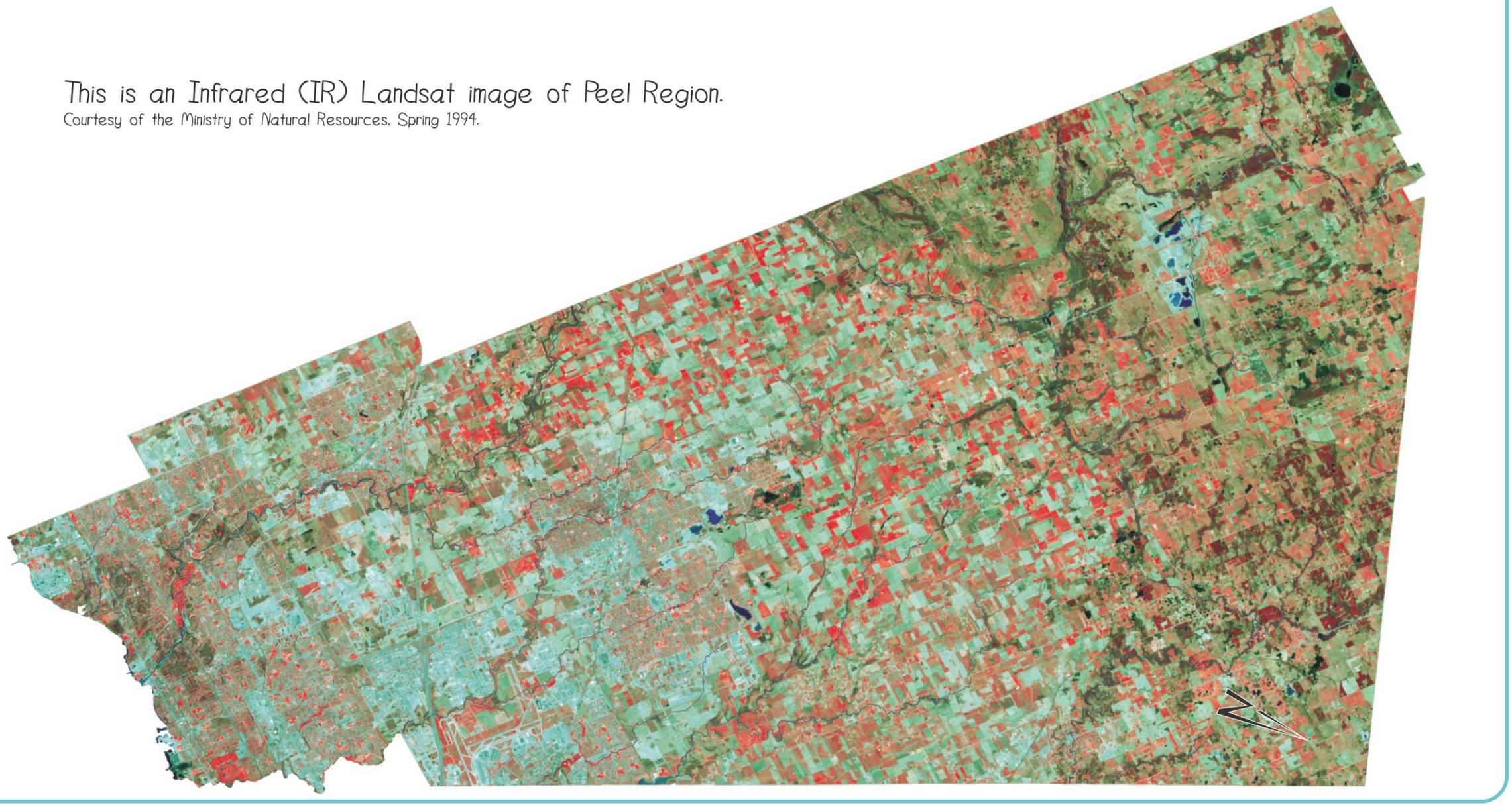
Sylvia Link (Peel District School Board)

Selected Sources:
Census of Canada
Credit Valley Conservation - Credit Watershed Natural Heritage Project
Ecological Land Classification (ELC)
Hemson Consulting Limited
Ministry of Natural Resources
Ontario Clean Water Agency
Peel District School Board - Directions Publication
Peel Heritage Complex
Peel Region Ortho-digital Imagery
Region of Peel Official Plan
Settlement History of Peel
The Ontario Curriculum: History and Geography, Grade 7 and 8
The Region of Peel Physical Survey
West Credit Subwatershed

Software used:
Adobe Illustrator 7.0.1
Adobe Mapublisher 3
Adobe PageMaker 6.5
ArcInfo 7.2.1
ArcView 3.2
CorelDraw 5
CorelDraw 9
HP Precision Scan Pro
Microsoft Excel
Microsoft Outlook
Microsoft PhotoEditor

Answers:

Answer 1: Brampton
Answer 2: An increase of 28 acres
Answer 3: 1,647 + 8,750 = 10,397 autos
Answer 4: 6,747 swimming pools
Answer 5: 306 kilograms
Answer 6: 679 people/ km²

Region of Peel
Working for you

This is an Infrared (IR) Landsat image of Peel Region.
Courtesy of the Ministry of Natural Resources, Spring 1994.